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ABSTRACT

This report discusses the extent and character of the distance learning (DL) activities of Maryland colleges and universities during academic year 2000 (fall semester 1999 and spring semester 2000). Out-of-state institutions that might have been operating in Maryland are not included. Between 1997 and 2000, Maryland colleges and universities increased the number of credit courses offered by all forms of distance learning from 1,245 credit courses with 29,145 enrollments to 2,135 courses with 53,194 enrollments. In 1997, one-way, pre-recorded video was the most popular mode of DL delivery, but in 1999-2000, the most popular modes were asynchronous online instruction (1,064 courses), one-way, prerecorded video (513 courses), and two-way interactive video and audition (362 curses). In 2000, 14 Maryland institutions offered 50 degree programs either primarily or entirely by distance learning. A digital divide has been identified between Maryland's higher education institutions. On one side are the institutions that have adopted DL enthusiastically, and on the other are institutions, generally the smaller community colleges, a few public universities, and most independent colleges, who have not invested in electronically mediated instruction. Study results suggest that much of the future growth in higher education enrollments will be in the use of information technologies to reach new markets, colleges, and universities that have not entered DL in a competitive way. The survey is attached. (Contains 87 tables.) (SLD)

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Distance Learning in Maryland Colleges and Universities

Academic Year 2000

M. Rosenthal

U.S. DEPARTMENT OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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Executive Summary

This report discusses the extent and the character of the distance learning (DL) activities of Maryland colleges and universities during Academic Year 2000—fall semester 1999 and spring semester 2000. Out-of-state institutions that might have been operating in the State are not included. "Distance learning," as used here, refers to education or training delivered *off-campus* via electronic technologies, including video, audio, and computer-based instruction.

When possible, comparison is made in this analysis with data previously reported for the four instructional sessions of *calendar 1997* -- the winter session, the spring semester, the summer session, and the fall semester. Overall, the data indicate an explosive growth of distance learning in the three intervening years. A few of the most significant findings resulting from the survey and analyzed in the following pages are:

- Between 1997 and 2000, Maryland colleges and universities increased the number of credit courses offered by all forms of distance learning from 1,245 credit courses with 29,145 enrollments to 2,135 courses with 53,194 enrollments.

- In 1997, the most popular modes of delivery for distance learning in rank order were
  (1) one-way, pre-recorded video (493 courses);
  (2) two-way interactive video and audio (335 courses); and
  (3) asynchronous online instruction (153 courses).

  In 1999-2000, the most popular modes of delivery for distance learning in rank order were
  (1) asynchronous online instruction (1,064 courses)
  (2) one-way, pre-recorded video (513 courses);
  (2) two-way interactive video and audio (362 courses);

- In 1997, 10 Maryland colleges and universities offered 17 degree programs either primarily or entirely by distance learning. In 2000, 14 Maryland institutions offered 50 degree programs either primarily or entirely by distance learning.

- A "digital divide" has developed among Maryland's higher education institutions in regard to their participation in the information technology revolution. On one side of the divide are the University of Maryland University College (UMUC), the larger community colleges, several public universities, and 4 independent institutions. These institutions have adopted distance learning enthusiastically. On the other side of the divide are institutions—generally the smaller community colleges, a few public universities, and most independent colleges, who have (for either financial or academic reasons) not invested in electronically-mediated instruction and do not share in the enrollments it attracts.

- There is a need for online "utilities" such as *MarylandOnline* and the *Maryland Digital Library* that provide support services to all institutions. These utilities can help the weaker institutions achieve a more level playing field while also providing services needed by the technology leaders.

This is not to suggest that the expansion of distance learning has not touched all segments of higher education. It has. The data reveal the following:

1. Whereas three years ago, of the 11 constituent institutions of the University System of Maryland (USM), only the University of Maryland University College had a significant distance learning effort; now all of the institutions of the USM have adopted DL in at least a limited form. Six USM campuses now offer complete degree programs by DL.

2. Still, the University of Maryland University College continues to dominate distance learning in Maryland as it did in 1997; and, because of the number and breadth of the courses (536) and degree programs (24) it offers online, UMUC has become a world-class competitor in the field of electronic distance learning.

3. Since 1997, the DL enrollments of all community colleges have grown; but a gap seems to be widening between the relatively large DL enrollments at 5 of the larger community colleges (Anne Arundel, College of Southern Maryland, Prince Georges, Community College of Baltimore County, and Howard), on the one hand, and the smaller DL enrollments of the rest of the community colleges.

4. Although 4 independent colleges—Capitol College, Columbia Union College, Goucher College, and Johns Hopkins University—have become major distance learning providers, the vast majority of independent colleges and universities (19 out of 26 institutions) have not adopted distance learning in any form.

5. The baseline technology necessary for the delivery of asynchronous computer-aided courses exists at all public institutions; but this infrastructure is absent at most independent colleges and universities.

If, as many experts contend and the data here displayed indicate, much of the future growth in higher education enrollments will be in the use of information technologies to reach new markets, colleges and universities which have not entered distance learning in a competitive way will be at a great disadvantage. detailed institutional data are contained in the tables that follow the narrative report. Summary tables by segment are interspersed through the narrative and are also found among the tables. In Section VI: *Concluding Remarks*, certain implications for policymakers are discussed.

Finally, a word of caution. One should note that "distance learning is not for everyone." Certain institutions have made a clear policy decision that the provision of distance learning is not appropriate to their mission. In other cases, faculties have decided that their discipline does not lend itself to distance learning. These are reasonable and valid decisions. Each institution must decide what is the proper balance between traditionally delivered instruction and instruction delivered by distance learning. But State policy should assure that this decision is based on academic grounds, not on a lack of information technology resources.

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Introduction

The purpose of this report is to provide a portrait of the use of distance learning by Maryland colleges and universities. This data was collected in Fall 2000 for the first time as a part of the regular postsecondary education data collection of the Maryland Higher Education Commission. At present, it is planned to collect this data bi-annually.

Since the first survey of distance learning covering calendar year 1997, immense changes have occurred in the use of information technology in Maryland's colleges and universities. Much of this has been due to the coordination, encouragement, and leadership provided by the founders of the *Maryland Community College Teleconsortium* (MCCT) and *MarylandOnline* (MOL). These two organizations (recently merged into an expanded MOL) have developed statewide guidelines, provided statewide faculty technology training, and improved the student services available to distance learners in Maryland. In addition, since 1997, the University of Maryland University College (UMUC) has completed its transformation into the nation's leading virtual institution. As the data in this report will attest, UMUC provides more distance learning opportunities than all other Maryland institutions combined. And UMUC was the generous nurturing home for the birth and development of *MarylandOnline*.

Unfortunately, other initiatives to support distance learning in Maryland have not come to fruition. As of this writing in summer 2001, there still is no statewide educational network to facilitate and support the sharing of electronic courses (and other forms of data) among Maryland's colleges. The *Maryland Digital Library* is in danger of collapsing because of a lack of predictable funding. And the future of MOL itself is still uncertain.

In spite of these difficulties, the growth of distance learning in Maryland—especially of online learning—from 1997 to 2000 has been rapid. Many institutions have decided that they must develop the capacity to deliver distance learning to serve their students better. Other institutions have seen this as an entrée into new markets. In just three years the number of institutions offering online courses increased from 11 to 28, the number of online courses mushroomed from 183 to 1,115, and the total enrollments in electronically-delivered distance learning credit courses almost doubled from 29,415 to 53,194. However, the bulk of this growth was attributable to UMUC.

The reader should be aware that the rapid expansion in distance learning quickly renders precise data out-of-date; so the data herein are best seen as indicators of the relative size of the activity among the several institutions and segments of higher education at one point in time rather than as a precise indicator of the specific activity by any one individual institution.

For the purposes of this survey, the term "distance learning" refers to

> education or training delivered off-campus via audio, video and/or computer technologies, but **does not** include courses conducted exclusively via traditional print-based correspondence or courses in which the instructor travels to the remote site to deliver instruction in person for all class meetings.

Detailed tables containing the institutional responses to the survey are presented in the *Appendix*. In the report, the data have been analyzed in five topical categories:

(1) Measures of activity
(2) Delivery methods
(3) Instructional practices
(4) Support services for students and faculty
(5) Telecommunications equipment and services.

References in the text to numbered tables refer to the tables in the *Appendix*. Tables integrated into the text are indicated by letters. The data analyzed for this report will be updated regularly as a part of the Maryland Higher Education Commission's regular data collection process.

The primary author of this study was Dr. David E. Sumler, Director of Academic Affairs, Maryland Higher Education Commission.

I
Measures of Activity

Institutions were asked to report four indicators of the level of distance learning (DL) activity for Academic Year 1999-2000. The four indicators are

Number of credit courses delivered by distance learning
Enrollment in credit courses delivered by distance learning
Number of non-credit courses delivered by distance learning
Enrollment in non-credit courses delivered by distance learning.

When examining the data for courses, one must keep in mind that these data include all forms of electronically delivered courses. Therefore, one should not read into these numbers the prevalence or scarcity of a particular type of technology -- say, online courses or interactive video courses, because all methods of delivery are combined in this section. The extent of the use of different technologies is discussed in Section II of this report. The measures of activity for individual institutions are presented in Tables 1-16 in the *Appendix*.

Credit Courses Offered by Distance Learning

During 1999-2000, 34 out of 55 degree-granting institutions offered a total of 2,135 credit-bearing courses by distance learning. A few of these courses were repeated from session to session. So, the total of 2,135 includes courses duplicated from semester to semester.

Table A provides an overall view of the expansion of distance learning during the past three years. The total number of courses offered by distance learning has increased by 71.5%.

Table A: Credit Courses offered by Distance Learning (Duplicate courses included)

	Total # of Credit Courses Calendar 1997	Total # of Credit Courses Academic Year 1999-2000	Percentage Increase from 1997-2000	Percentage of Total in AY 2000
UMUC (University College)	216	536	148	25%
Other 4 Year Public Institutions	135	252	86	12%
Community Colleges	837	1,013	21	47%
Independent Institutions	57	334	486	16%
Total	**1,245**	**2,135**	**71**	

The expansion in all segments of higher education is clear. However, the absolute leadership of UMUC is so notable that this institution has been broken out in most of the data tables in this study. Of the 789 credit DL courses offered by the public 4-year institutions, the

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University of Maryland University College (UMUC) offered 536 (68%). The next most active public 4-year campuses were: Uniyersity of Maryland, Baltimore City (UMB) with 77 credit DL courses and University of Maryland, College Park (UMCP) with 60. (Table 1 in the appendix.)

The courses offered by community colleges were distributed among all the colleges, with all community colleges offering at least a few distance learning credit courses. (Table B) The most active community colleges were the largest ones: Community College of Baltimore County (155 courses), Anne Arundel Community College (138 credit courses), Prince Georges Community College (134), Howard Community College (127), and College of Southern Maryland (88). (Table 3)

The independent institutions as a group have increased their credit courses offered by distance learning by 486%, from 87 in 1997 to 334 in 1999-2000. However, these courses are offered by only 7 institutions out of 26. The majority of independent colleges and universities offer no DL courses. The most active campus was Columbia Union College, offering 200 DL credit courses. Other independent institutions offering significant numbers of DL credit courses were Goucher College (49), Johns Hopkins University (45), and Capitol College (31).

Table B. Credit Courses Offered by Distance Learning by Institution
Academic Year 1999-2000

Public 4-Year Institutions (13 institutions)		Community College (16 institutions)		Independent Colleges and Universities (26 institutions)	
Bowie State University	28	Allegany College of Maryland	55	Capitol College	31
Coppin State College	15	Anne Arundel Community College	138	Columbia Union College	200
Frostburg State University	17	Baltimore City Community College	33	Goucher College	49
Salisbury State University	NR*	Carroll Community College	41	Hagerstown Business College	2
Towson University	19	Community College of Baltimore Co.	155	Johns Hopkins University	45
Univ. of Baltimore (UB)	16	Cecil Community College	5	Md. Institute, College of Art	2
UMBC (Baltimore County)	13	Chesapeake College	49	Western Maryland College	5
UMB (Baltimore)	77	College of Southern Maryland	88		
UMCP (College Park)	60	Frederick Community College	52		
UMES (Eastern Shore)	0	Garrett Community College	9		
UMUC (University College)	536	Hagerstown Community College	25		
Morgan State University	8	Harford Community College	29		
St Mary's College	0	Howard Community College	127		
		Montgomery College	63		
		Prince Georges Community College	134		
		Wor-Wic Community College	10		
Totals	**789**		**1,013**		**334**

*NR No Response

Enrollments in Distance Learning Credit Courses

There were 53,194 headcount enrollments in credit-bearing courses offered by distance learning during Academic Year 1999-2000, an increase of 81% since 1997.

If one assumes that all of the credit courses were 3-credit courses, then one can assume that an equated full-time course load per student would be 10 courses (15 credit hours per semester, or 30 credit hours per year). By dividing the number of individual enrollments by the assumed course load, the resulting number of full-time equivalent students (FTES) for Academic Year 1999-2000 would be 5,319. This number would have to be adjusted slightly to account for graduate students, who take fewer courses per semester. Still, the total of around 5,200 - 5,300 FTES is a relatively safe estimate. If one compares FTE enrollment in DL in AY 1999-2000 to total FTE enrollment in all credit courses for Fall 1999 (207,167), the enrollment in DL accounted for approximately 2.6 % of total FTES enrollment. Since most of the DL enrollments were in the public institutions, the percentage was 2.9% when the public segments are considered separately. The DL enrollment equaled approximately the enrollment of one medium-sized public university, such as Frostburg State University or Salisbury University, but these online enrollments did not require dormitories, or classroom buildings.

Table C: Enrollments in Distance Learning Credit Courses Delivered by All Technologies

	Total # of Credit Enrollments Calendar Year 1997	Total # of Credit Enrollments Academic Year 1999-2000
UMUC (University College)	11,687	31,424
Other Public 4-Years	1,253	3,367
Community Colleges	15,822	16,059
Independent Institutions	653	2,344
Total	**29,415**	**53,194**

Non-Credit Courses Offered by Distance Learning

There were very few non-credit courses offered by distance learning in 1997—only 128 total. By 1999-2000, this number had more than tripled to 419. As in 1997, almost all (94%) of these courses were offered by community colleges. (Table D.)

This is somewhat surprising that more colleges and universities have not tapped this market; since the primary audience for distance learning is generally assumed to be already employed adults, who might be considered a ready market for non-credit personal and professional development opportunities.

Enrollments in Non-Credit Courses Offered by Distance Learning

Since the number of non-credit DL courses was small compared to the number of credit DL courses, the enrollment in non-credit courses was also proportionately smaller than that in credit courses. For the Academic Year 1999-2000, the non-credit DL enrollments were 2,090, compared to over 53,000 credit enrollments. Ninety-six percent (96%) of these enrollments were in community college courses. The total was a 98% increase over the 1997 total. (Table E.)

Table D: Non-Credit Courses offered by Distance Learning
(Duplicate courses included)

	Total # of Non-credit Courses Calendar 1997	Total # of Non-credit Courses Academic Year 1999-2000
UMUC (University College)	1	12
Four Year Public Institutions	21	4
Community Colleges	98	394
Independent Institutions	8	9
Total	**128**	**419**

Table E: Enrollments in Distance Learning Non-Credit Courses

	Total # of Non-Credit Enrollments Calendar Year 1997	Total # of Non-Credit Enrollments Academic Year 1999-2000
UMUC (University College)	32	Not Reported
Other Four-Year Public Institutions	30	68
Community Colleges	641	2009
Independent Institutions	351	13
Total	**1054**	**2090**

II
Delivery Methods

The survey sought answers to two major questions concerning delivery methods:

- Which were the primary technologies used?
- What were the intended instructional sites?

The survey distinguished among 9 primary instructional technologies and also had an "other" option. Twelve alternate delivery sites were offered, including at the student's home. Summary data are presented in Tables F and G on the following page. Data for individual institutions are presented in the tables in the *Appendix*. (Tables 17-28.)

Online Instruction

At some point during the period 1997 - 2000 asynchronous online instruction replaced one-way, pre-recorded video as the dominant mode of delivery for distance learning in Maryland. It is rare that we are able to identify such a change in educational practice so precisely.

In 1997, "asynchronous online instruction" ranked third among the most used modes of delivery. This instruction is entirely computer-based, available through the Internet. A course offered online is available to any student worldwide with access to the Internet. Such an instructional mode has only been available for a few years; and it is the most promising technology for the future growth of distance learning.

In Academic Year 1999-2000, the increase in the number of asynchronous online courses (1,067 in 1999-2000, up from only 153 in 1997) made this the most used mode of delivery for distance learning. This remarkable increase reflected the adoption of online instruction by almost all public colleges - both community colleges and four-year institutions. (Tables 17=20.) Whereas UMUC was alone among the public 4-year institutions in offering asynchronous online courses in 1997, by 1999-2000, 7 of the 13 public 4-year colleges and universities offered courses with this technology. Similarly , only 7 community colleges offered asynchronous online courses in 1997, but 14 of 16 community colleges did so in 1999-2000.

As we have seen, independent colleges offered few courses by distance learning in 1997. Most of the online courses were offered by two institutions: Johns Hopkins University (JHU) and Capitol College. The Johns Hopkins University offered 14 courses online, and Capitol College offered 4 courses online. In 1999-2000, Capitol College had increased its online offering to 28 courses; while JHU had reduced its online courses to 7. However, Goucher College now offers 49 online courses (versus 1 in 1997) and 3 Master's degree programs. Other independent campuses reporting online courses were Baltimore Hebrew University, Maryland

Table F. Rank Order of Use of Leading Distant Learning Delivery Modes
Academic Year 1999 – 2000

Technology	Rank in 2000	# of courses in 2000	Rank in 1997	# of courses in 1997
Asynchronous online	1	1,064	3	153
One-way prerecorded video	2	513	1	493
Two-way interactive video and audio	3	362	2	335
One-way live video, one-way audio or 2-way audio	4	274	4	85
Two-way online	5	48	5	30

Table G: Primary Modes of Delivery for Distance Learning Courses: Online Courses
Summary Table

	# of asynchronous online courses,		# of 2-way online courses		# of 2-way Interactive Video and Audio		# of 1-way live video, one-way audio		# of 1-way prerecord. video	
	Calendar Year 1997	Academic 1999-2000	Calendar Year 1997	Academic 1999-2000	Calendar Year 1997	Academic 1999-2000	Calendar Year 1997	Academic 1999-2000	Calendar Year 1997	Academic 1999-2000
UMUC (University College)	55	**451**	0	**0**	35	**28**	0	**178**	0	**0**
Other Four Year Public Institutions	0	**35**	0	**7**	74	**123**	0	**6**	21	**73**
Community Colleges	79	**514**	24	**12**	207	**196**	16	**90**	472	**440**
Independent Colleges	19	**67**	6	**29**	19	**15**	0	**0**	0	**0**
Total	153	**1,067**	30	**48**	335	**362**	16	**274**	493	**513**

Table H. Institutions Reporting Asynchronous Online Courses Offered During 1997 with Number of Courses Offered

Public 4-Year Institutions (13 institutions)		Community College (16 institutions)		Independent Colleges and Universities (26 institutions)	
Univ. of Md. Univ. College	55	Anne Arundel CC	6	Capitol College	4
		Carroll CC	6	Goucher College	1
		CCBC Catonsville	3	Johns Hopkins Univ.	14
		Chesapeake College	1		
		Howard CC	2		
		Montgomery College	51		
		Prince George's CC	10		
Totals	**55**		**79**		**19**

Table I. Institutions Reporting Online Courses Offered
(both asynchronous and 2-way online)
During Academic Year 1999-2000 with Number of Courses Offered

Public 4-Year Institutions (13 institutions)		Community College (16 institutions)		Independent Colleges and Universities (26 institutions)	
Bowie State University	4	Allegany College of Maryland	7	Baltimore Hebrew University	4
Coppin State College	10	Anne Arundel Community College	143	Capitol College	28
Frostburg State University	7	Baltimore City Community College	4	Goucher College	49
Towson University	2	Carroll Community College	25	Hagerstown Business College	2
UMB (Baltimore)	12	Community College of Baltimore Co.	95	Johns Hopkins Univ.	7
UMUC (University College)	451	Cecil Community College	1	Maryland Institute, College of Art	2
Morgan State University	8	Chesapeake College	6	Western Maryland College	5
		College of Southern Maryland	20		
		Garrett Community College	5		
		Hagerstown Community College	23		
		Harford Community College	31		
		Howard Community College	49		
		Montgomery College	60		
		Prince Georges Comm College	58		
Totals	**494**		**527**		**97**

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Institute College of Art, and Western Maryland College.

It must be noted that the growth of online instruction in Maryland has been greatly aided by two consortia: the *Maryland Community College Teleconsortium* (started in 1998) and *MarylandOnline* (begun in 1999). These two organizations, that have recently merged into MarylandOnline), have provided the structures necessary for the sharing of courses, statewide faculty technology training, the development of common policies, and shared student services.

Video

In 1997, by far the largest number of DL courses (493) were delivered by one-way, pre-recorded video. This was probably an indication of the large number of courses offered by the *College of the Air*, a consortium of colleges (mostly community colleges) contracting with Maryland Public Television to offer college courses for credit, with the video being broadcast by MPT into students' homes. The second most numerous category in 1997 was those courses (335) offered by 2-way interactive video and audio.

While there was a slight increase in the number of DL courses delivered by the several video technologies between 1997 and 1999-2000, it is clear that the rapid expansion of this technology evident in the early 1990s has given way to the growth in online instruction.

Interactive video courses in Maryland are offered over three networks:

(1) the Maryland Interactive Distance Learning Network (MIDLN),
(2) the University System of Maryland Interactive Video Network (IVN), and
(3) the Baltimore Region Community Colleges Instructional Video Network (BRCCIVN).

MDLN is a full-motion video, fiber optic DS-3 network managed by Verizon. IVN and BRCCIVN are compressed video networks carried on T-1 lines. A MDLN classroom connects four sites interactively with video quality similar to a home television. There are 8 monitors in a classroom (4 in front for the students to see, 4 in back for the teacher to see). An IVN or BRCCIVN classroom has two monitors-one showing the distant class and one the classroom where instruction takes place. The compressed video is slightly distorted.

Whereas the total number of video courses increased by 305 courses, most of this increase was in the transmission of one-way live video with one-way audio by UMUC (178 courses) and by the community colleges (90 courses). The increase in two-way interactive video and audio courses (teleconferencing) was only 27 courses (from 335 to 362). The number of pre-recorded video courses (such as the *College of the Air* offers on public television) also had a modest increase of 20 courses (from 493 in 1997 to 513 in 1999-2000).

As we have seen, independent colleges offered few courses by distance learning. In fact, the number of video courses offered by independent colleges and universities actually decreased from 19 to 15 over the three years between surveys.

Sites for the Delivery of Video Instruction

As opposed to online instruction which is available where and when a student can access the Internet, interactive video-instruction is site-based and scheduled for specific times, like traditional classroom instruction. During the 1999-2000 academic year, the most popular delivery sites were video classrooms at branch campuses or off-campus centers of the institutions offering the courses (217 courses). The second-most popular spot for public 4-year institutions was at other public 4-year institutions and for community colleges at other community colleges. (Table I and Tables 25-28.)

Once again, the discrepancy between the activity of the public institutions and the independent colleges and universities is striking. Whereas 217 courses were delivered to branch campus sites by video, only 7 of these were offered by independent institutions.

Since 1997, considerable progress has been made in providing on-site educational opportunities at private sector workplaces and at military installations. The number of courses delivered a to private sector workplace increased from 2 in 1997 to 35 in 1999-2000. Courses offered at military bases were up from 7 to 65. In both cases the major provider of these courses was UMUC. Still, these are relatively small numbers, especially in regard to private industry.

In one negative outcome, campuses reported delivering fewer video courses to public secondary schools in 1999-2000 than in 1997. The total was down from 37 to 25.

Primary Audiences for Distance learning

The institutions being surveyed were requested to identify the primary intended audience for each of their credit and non-credit courses. The common belief is that distance learning, especially asynchronous online instruction, is ideally structured to appeal to adult, fully-employed learners who need to find time in a busy schedule for education.

Institutions were asked to select from among a variety of potential audiences as indicated in Table K on the following page. The largest proportion of courses (63%) for which a primary audience was identified were intended for undergraduate students. But this was down from 83% in 1997 The next largest intended audience was graduate students with 17.5% of all courses in 1999-2000 being aimed at this audience—up from 10.5% in 1997.

Table J: Courses Delivered by Video to Certain Sites, Academic Year 1999-2000 Compared to Calendar Year 1997

	# at a branch campus/ off-campus center		# at a public 4-year college or university		# at a community college		# at a public secondary school		# at a private sector workplace		# at a state agency site		# at a military base		# at other sites	
Segments	1997	99-00	1997	99-00	1997	99-00	1997	99-00	1997	99-00	1997	99-00	1997	99-00	1997	99-00
UMUC	39	**67**	0	**68**	0	**34**	0	**0**	1	**33**	0	**0**	0	**55**	1	**0**
Other 4 Year Public Institutions	40	**35**	11	**40**	6	**36**	6	**9**	1	**2**	0	**21**	6	**10**	26	**103**
Community Colleges	129	**108**	5	**17**	83	**113**	29	**16**	0	**0**	0	**0**	1	**0**	49	**8**
Independent Institutions	12	**7**	3	**0**	10	**2**	2	**0**	0	**0**	0	**1**	0	**0**	1	**5**
Total	220	**217**	19	**125**	99	**185**	37	**25**	2	**35**	0	**22**	7	**65**	76	**116**

Table K: Distance Learning Courses/Activities by Primary Audience

	Under-graduate students	Graduate Students	Prof. Con.Educ. Students	Other Con.Educ. Students	High School Students
UMUC	388	160	0	0	0
Other 4 Year Public Institutions	67	116	7	1	0
Community Colleges	708	0	40	325	0
Independent Institutions	128	84	20	6	0
Total	**1291**	**360**	**67**	**332**	**0**

III
Instructional Practices

The institutions surveyed were asked several questions concerning the nature of their distance learning offerings. The general intent was to determine the relationship of their offerings to their traditional on-campus curriculum.

Development of Course Content

It was not surprising to note that the largest group of DL courses were developed by the faculty of the institutions offering the courses. (See Table L) Of the 2,284 courses reported in response to this question, 1,626 (71%) were developed by the institutions' faculty members. In fact, all of the courses offered by UMUC, the other 4-year public institutions, and the independent colleges were developed by faculty at the institution offering the courses.

Among community colleges, on the other hand, 451 (20%) of the courses were developed by commercial vendors. It may be assumed that these are *College of the Air* courses distributed by the Public Broadcasting Service's Adult Learning Service and the Annenberg CPB project. Whatever the source, the use of commercial vendors is a significant development in the Academic world. Still, given the large vendor industry that has developed to provide online courses, it is surprising Maryland institutions have not adopted more commercial instructional content.

Among independent colleges, all courses reported were developed by either institutional faculty or by another college or university.

Table L. Development of Course Content, Calendar Year 1997 and Academic Year 1999-2000

Segments	# Developed by faculty at the institution		# Developed by another higher education institution		# Developed in collaboration w/ another institution		# Developed by a commercial vendor		Other	
	1997	'99-'00	1997	'99-'00	1997	'99-'00	1997	'99-'00	1997	'99-'00
UMUC	32	**548**	32	**0**	0	**0**	0	**0**	0	**0**
Four Year Public Institutions	103	**237**	0	**0**	8	**0**	19	**0**	2	**17**
Community Colleges	292	**650**	38	**111**	2	**14**	283	**451**	96	**18**
Independent Institutions	36	**191**	0	**3**	1	**0**	0	**0**	0	**44**
Total	463	**1626**	70	**114**	11	**14**	302	**451**	98	**79**

Degree Programs Offered by Distance Learning

The development of an individual course for delivery by distance learning can be a very difficult and challenging task, and it indicates a significant investment of resources by an institution. The offering of *entire* degree programs, therefore, is not an easy goal to achieve. An associate degree requires at least 60 credits earned or approximately 20 courses. A bachelor's degree requires at least twice that amount -- 120 credits or 40 courses. Master's degree programs are shorter in length (at least 30 credits or around 10 courses).

Given the size of this task, and the fact that the spread of distance learning is so recent, it is not surprising, then, that very few institutions had reached the point, in 1997, of offering entire degrees by DL. In fact, only 6 of the 54 institutions surveyed reported that they offered entire degree programs by distance learning. When asked if they offered any degree programs *primarily by distance learning* (meaning 75% or more of the courses were DL courses), four more institutions joined the first six.

By 1999-2000, the picture had changed considerably, with 14 institutions offering 50 degree programs either entirely or primarily (at least 75% of the required courses) by distance learning. The number of programs was determined largely by UMUC, which offered 24 degree programs (14 bachelor's degrees, 10 master's). (Table M)

In 1997, most of the complete degree programs offered were at the Master's degree level. These are shorter programs, and all the courses are concentrated in the major discipline, making this a more manageable developmental project as compared to an entire bachelor's or associate's degree program requiring general education courses in many disciplines. In 1999-2000, the degrees available by DL (and primarily by online instruction) include 14 associate degree programs and 16 bachelor-level programs as well as 20 master's programs.

Membership in Consortia

During the period between the 1997 survey and the present survey, three significant consortia had developed in Maryland to encourage and foster distance learning. These are the *Maryland Community College Teleconsortium* (MCCT), *MarylandOnline* (MOL), and the *Maryland Digital Library* (MDL).

Through MCCT, the community colleges share their campus-free online offerings. A student at community college A may enroll in courses sponsored by community colleges B, C, D, and so on but will pay the tuition of his or her home college and have the course entered on the transcript as if the course were taken at the home college. MCCT allows the community colleges to save on the considerable costs of producing and delivering distance learning courses while still meeting student Demands for quality online instruction.

MarylandOnline is an inter-segmental voluntary consortium of Maryland community colleges and 4-year colleges and universities that enables students to achieve their educational goals by completing articulated courses, certificates, and entire degree programs through the master's degree offered via distance learning technologies. Students with demanding home and work responsibilities have the flexibility they need to pursue the degrees and certificates leading to career advancement and satisfaction. Currently

MarylandOnline represents institutions offering 9 certificate programs, 9 associate degrees, 15 bachelor's degrees, and 12 graduate degrees – all available at a distance.

Table M: Programs Offered by Distance Learning
Academic Year 1999-2000

	Program Name		*Program Level*			
			Certificate	Associate	Bachelor's	Master's
FOUR-YEAR PUBLICS						
Bowie State University	B. S. of Technology				1	
Coppin State College	M.Ed. in Special Education M.Ed. in Curriculum and Instruction					2
Univ. of Baltimore (UB)	M. of Business Administration					1
UMBC (Baltimore County)	M. of Management Studies in EHS Certif. In Instructional Sys. Design Certif. In Distance Learning		2			1
UMCP (College Park)	M. of Eng, Reliability M. of Fire Protection Engineering					2
UMUC (University College)	Bachelor Accounting Behavioral & Soc.Sci. Bus & Management Communication Studies Comp. & Inform.Science Computer Studies English Environmental Mgmt. Fire Science Humanities Inform.Sys. Mgmt Management Studies Paralegal Studies Psychology	Master Comp. Sys. Mgmt Envir. Management Inform Technology Management Technology Mgmt Telecom. Mgmt M. of Business Adm Software Engineering International Mgmt Distance learning			14	10
COMMUNITY COLLEGES						
Anne Arundel Comm Coll	Business Management Business Administration General Studies	Computer Science Financial Accounting Mngmnt Info. Sys		6		
Carroll Comm. College	Arts & Sciences	General Studies		2		
College of Southern Md.	Arts & Sciences General Studies	Arts & Humanities		3		
Howard Comm. College	General Studies Liberal Arts	Business Admin		3		
Prince George's Comm College	General Mgmt Certif. Gen. Education Certif.		2			
INDEPENDENT INSTITUTIONS						
Capitol College	Electrical Commerce Management				1	
Goucher College	Historic Preservation. Arts Administration	MFA,Creative Non-fiction				3
Johns Hopkins University	Master of Public Health					1
Totals			**4**	**14**	**16**	**20**
Total Degree programs					***50***	

Maryland's academic libraries, which serve the state's publicly supported and independent two- and four-year colleges and universities, have joined to develop and to put in place. a *Maryland Digital Library*. The goals of MDL are to: (1) increase effective access to information of critical value in both Internet accessible electronic form and in library collections of books, journals, sound recordings and other traditional forms of material, (2) optimize effective use of funding in the acquisition and creation of digital resources, and (3) link Maryland to the rapid Developments in national and global digital library capabilities. The principal benefits of the *Maryland Digital Library* accrue from two key program components – the *Maryland Universal Statewide Access* (MdUSA) that provides access to licensed Internet-accessible information and the *Maryland Premier Academic Catalog* (MdPAC) that provides online access first to existing library holdings and then to newly created digital content.

Table N presents the extent of participation in MOL and MDL. While it is notable that neither of these organizations existed in 1997, it is revealing that only about half of Maryland's colleges and universities are members of the two consortia. These are, of course, the institutions most active in distance learning. The colleges and universities that have not ventured into the world of electronically-mediated instruction were also not active in these cooperative endeavors to foster and expand distance learning. So, a cycle of cause and effect occurs. The gap widens between the leading DL institutions and the institutions not yet involved in DL. As a result, the "digital divide" widens among Maryland's higher education institutions in regard to their participation in the information technology revolution.

Table N: Membership in MarylandOnline and the Maryland Digital Library
Academic Year 1999-2000

	Total Number of Institutions	MarylandOnline	Maryland Digital Library
Four Year Public Institutions	13	6	13
Community Colleges	16	14	15
Independent Institutions	26	2	5
Total	**55**	**22**	**33**

IV
Support Services for Students and Faculty

Support Services for Distance learning Students

Colleges and universities have developed a number of ways to provide support services for distance learning students—some who may never come on campus. Obviously, these services will vary by the form of instruction. For example, a community college delivering interactive video courses to a local high school may have the instructor visit the school on a regular basis. On the other hand, a public university offering online courses to students who may be anywhere on the globe must also be providing online student services.

In completing the survey, a number of institutions left this section blank—not responding in the positive or the negative. Blank answers have been counted as meaning that the service was "not available." This interpretation was consistent with other responses from these campuses--such as a lack of courses offered by distance learning.

The major services provided in support of distance learning are contained in Tables N and O. The most notable of these are the online services. Thirty-two (32) institutions provided students with e-mail or online access to an instructor. Twenty-eight (28) institutions provided electronic access to library catalogs. Twenty-three (23) institutions provide online access to wide area networks for students. However, only 16 provided for online registration; and only 9 provided online academic advising.

Training and Technical Assistance for Faculty Members

One measure of the maturity of an institution in offering distance learning is the extent to which the college or university has developed mechanisms for preparing faculty to offer courses by distance learning rather than leaving faculty initiative to chance. Many institutions offer several distance learning courses because of the energy and enterprising spirit of one or two faculty members. But institutions that take distance learning seriously provide training and curriculum development support in an organized and ongoing fashion.

During 1999-2000, only around one-half of the colleges and universities in Maryland had formal programs of faculty training and distance learning course development. Training and technical assistance was far more available to faculty at public institutions than at independent colleges and universities. Twenty-seven (27) of the 29 public institutions responding offered training in the use and application of distance learning technology. Only 6 of the 26 independent institutions offered such training. The same group of institutions reported also providing training for faculty in the development of curricula for DL courses (29) and for teaching methods for DL courses (31).

Table N: Student Support Services Available for Distance Learning Courses

√ = Available for all courses ◆ = Available in some courses No = Not available

	Telephone or Computerized Registration			Online Academic advising			Online financial aid advising			Toll-free phone/e-mail Access to instructor			Toll free Phone/e-mail access to tech staff			Online access to wide area network			Instructor visits to remote sites of video courses			TA/tutor/ Facilitator At remote sites of video courses		
	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No
4 Year Public Institutions (13)	6	2	5	2	2	9	5	1	7	8	1	4	7	1	5	4	3	6	1	8	4	0	7	6
Community Colleges (16)	5	1	10	3	1	12	2	1	13	11	4	1	0	9	7	7	3	6	1	10	5	0	9	7
Totals for public institutions (29)	**11**	**3**	**15**	**5**	**3**	**21**	**7**	**2**	**20**	**19**	**5**	**5**	**7**	**10**	**12**	**11**	**6**	**12**	**2**	**18**	**9**	**0**	**16**	**13**
Independent Institutions (26)	2	0	24	1	0	25	0	1	25	8	0	18	5	1	20	6	0	20	0	3	23	2	1	23
Totals (55 institutions)	**13**	**3**	**39**	**6**	**3**	**46**	**7**	**3**	**45**	**27**	**5**	**23**	**12**	**11**	**32**	**17**	**6**	**32**	**2**	**19**	**34**	**2**	**17**	**36**

Table 0: Library Services Available for Distance Learning Students

√ = Available for all courses ◆ = Available in some courses No = Not available

	Online library catalog			Online library orders			Online library reserves			Ability to download full-text items from institutional library			Cooperative agreements with other libraries for access		
	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No
4 Year Public Institutions (13)	7	3	3	5	5	3	5	5	3	6	2	5	7	2	4
Community Colleges (16)	12	0	4	8	0	8	9	0	7	8	1	7	14	0	2
Totals for public institutions (29)	**19**	**3**	**7**	**13**	**5**	**11**	**14**	**5**	**10**	**14**	**3**	**12**	**21**	**2**	**6**
Independent Institutions (26)	6	0	20	4	0	22	4	0	22	3	0	22	8	0	18
Totals (55 institutions)	**25**	**3**	**27**	**17**	**5**	**33**	**18**	**5**	**32**	**17**	**3**	**35**	**29**	**2**	**24**

Table P. Number of Institutions Offering Each Type of Training/Technical Assistance to Faculty During Academic Year 1999-2000

Institutions Surveyed	Use & Application of Distance Learning Technologies	Development of Curricula for Distance Learning Courses	Teaching Methods for Distance Learning Courses
Four Year Public Institutions	12	12	12
Community Colleges	15	12	14
Independent Institutions	6	5	5
Total	**33**	**29**	**31**

V
Telecommunications Equipment and Services

Institutions were requested to indicate whether they owned or operated 25 specific types of telecommunications equipment, facilities, or services. For analysis, the equipment/facilities have been grouped into three categories:

1. Multi-media and computer-aided instruction equipment and services.

2. Compressed video, radio and audio facilities;

3. Video production facilities and analog video links;

It must be remembered that, before the 1990s, distance learning using telecommunications meant primarily video broadcasts or interactive video teleconferencing using analog equipment such as satellite transmissions. Therefore, during the 1970s and 1980s, many campuses invested in satellite uplinks and downlinks, video production studios, and other equipment (such as microwave transmission towers) to carry analog video signals.

Following the general availability of the Internet to the public in the late-1980s and its commercialization in the early 1990s, the emphasis of educators shifted to development of online and media-enhanced courses. By 1997, leading institutions had introduced online courses but few complete degree programs. Three years later in 1999-2000, as we have seen, 50 entire degree programs were being offered by distance learning—most of them online.

Higher education institutions have had to adapt to these changing technologies. It has been expensive. The telecommunications infrastructure for entire campuses has been re-designed and replaced in the last half of the 1990s. Generation after generation of rapidly obsolescent computer hardware and software require continual upgrading. The strain on campus budgets and capital funds has been enormous. There should be no surprise that a recent study has concluded that only the financially strongest institutions can afford to remain at the forefront of advances in technology. (Lumina Foundation for Education, *Funding the Infostructure.*)

Multi-media and Computer-aided Instruction Equipment and Services

The fastest growing form of distance learning is asynchronous online instruction *via* the Internet. If a college or university is planning to enter this arena, it must supply a number of related telecommunications services to its students and must develop certain baseline institutional capabilities. This section of the survey requested institutions to indicate whether or not they had these capabilities. A number of colleges and universities, primarily independent institutions that offered no DL courses, left this section blank. These responses are treated as negative responses.

Table Q: Multi-media & Computer-Aided Instruction Equipment and Services
Academic Year 1999-2000

	Internet Node Site	Electronic Classroom	E-mail	WWW	Institutional Web Page	Web Page capability for students	Bulletin board or computer conferencing system	Class listserv capability	Voice Mail
Four Year Public Institutions (13)	10	10	12	12	12	10	12	10	12
Community Colleges (16)	12	14	15	15	15	8	10	7	15
Independent Institutions (26)	4	4	6	6	6	6	6	3	4
Total (55)	**26**	**28**	**33**	**31**	**33**	**24**	**28**	**20**	**31**

The responses displayed in Table Q indicate that proportionally more of the 4-year public institutions had computer-related instructional and multi-media equipment and services available to their students during 1999-2000 than did the community colleges or the independent institutions. For example, while 10 public 4-year institutions were Internet node sites, 12 community colleges and 4 independent institutions had the equipment for this direct link to the Internet.

Electronic bulletin boards, computer conferencing systems, and class listservs are considered by some as essential to online distance learning and can also be enhancements to traditional classroom-based education. Once again, the public 4-year institutions led the way in the implementation of these services. Smaller community colleges and almost all independent colleges and universities lacked these services.

Electronic classrooms are classrooms containing networked PCs which are tied together in a local area network and are usually linked to the Internet. Such classrooms allow students to work together on collaborative projects, to contribute online (sometimes anonymously) to classroom discussions, to do research on the Internet during class, to engage in simulations, and many other applications. Twenty-four (24) of the 29 public institutions had at least one electronic classroom; whereas only 4 of 27 independent institutions reported having these classrooms.

Video Production Facilities and Analog Video Links

A large number of the public campuses had full video production studios. Of the 13 public 4-year institutions, 9 had studios. Likewise, 9 of the 16 community colleges had studios. Only two (2) of 27 independent institutions had studios. The same contrast holds true for television field production units (mobile TV trucks), with 7 public 4-year institutions and 7community colleges having these trucks. Two (2) independent institutions had such units. (See Table R.)

Of all 29 public institutions, only two community colleges did not have satellite downlinks. The broad use by public institutions of satellite technology once again contrasts starkly with the lack of such equipment among the independents, where only 1 campus reported having a satellite downlink.

Table R. Number of Institutions with Video Production Facilities & Analog Video Links
Academic Year 1999-2000

	Full Production Studio	TV Field Production Units	ITFS Channel	ITFS Receive Site	Microwave Dist. Links	Ku Band Satellite Uplink	C Band Satellite Uplink	Ku Band Satellite Downlink	C Band Satellite Downlink	CATV Channels	Broadcast TV Stations
Four Year Public Institutions	9	7	4	2	5	1	1	9	10	8	3
Community Colleges	9	7	1	1	2			14	14	12	4
Independent Institutions	1	2			1			1	1		
Total	**19**	**16**	**5**	**3**	**8**	**1**	**1**	**24**	**25**	**20**	**7**

Table S: Compressed Video, Radio Stations
Academic Year 1999-2000

	Institutions Having Interactive Digital Compressed Video Codecs	Broadcast Radio Stations
Four Year Public Institutions (13)	12	3
Community Colleges (16)	15	2
Independent Institutions (27)	2	1
Total (56)	**28**	**6**

Twenty (20) public institutions operated cable channels (CATV), and 7 managed their own broadcast TV stations.

Compressed Video, Radio and Audio

The *Maryland Distance Learning Network* (MDLN) was begun in 1994 to encourage the sharing of courses among Maryland campuses and with high schools.. MDLN, carried on broadband DS-3 fiber optic lines, is compressed very little, so that the received picture appears as full-motion television. The *University of Maryland Interactive Video Network* (IVN) and the *Baltimore Regional Community College Interactive Video Network* are both heavily compressed, leading to slight distortions of the picture. However, all three networks function well as a distance learning medium. The full motion MDLN is more easily accepted by public school children, but adults adapt quickly to all three systems. Compressed video usage is now growing more rapidly than satellite usage. On the other hand, Web-based multi-media instruction on personal PCs is growing more rapidly than interactive video in general.

Among the institutions responding to the survey concerning their practices in 1999-2000, 27 public institutions (out of 29 total) and two (2) independent institutions out of 26 were using interactive compressed video to deliver courses.

The use of radio by colleges and universities for course delivery is not wide-spread. Six (6) institutions reported having broadcast radio stations. However, the use of these radio stations is primarily for training communications majors rather than for delivering instruction.

VI
Concluding Remarks

Now that we have two comparable surveys of distance learning activity in Maryland---for 1997 and for 1999-2000, we are able to see patterns in data which confirm developments suggested by the earlier data collection. While the overall impression left by the data is one of explosive, revolutionary growth in distance learning, there are also aspects leading to concern.

Whereas, in 1997 few Maryland institutions were offering DL courses by asynchronous online delivery, three years later 21 of the 29 public colleges and universities were offering these courses. In 1,801 credit courses offered by distance learning technologies, these 21 public institutions had 50,850 individual enrollments. This enrollment, when converted to full-time equivalent students (FTES), is the equivalent of 5,085 full-time students. This is about the size of the FTES enrollment of Salisbury University or Frostburg State University. Of course, we must always remember that the vast majority of these enrollments are at one institution—the University of Maryland University College.

The reverse side of this revolutionary environment has been the slow development of distance learning among the independent institutions. Only 7 of the 26 independent institutions reported offering credit courses by DL technologies. These seven institutions shared 2,344 enrollments. Most (325) of the 334 DL courses offered by independent institutions were attributable to only 4 institutions.

So, a "technology gap" or "digital divide," first noted in 1997, continues and even grows between the colleges and universities that have embraced and can afford the technology revolution and the institutions that are being left behind technologically. Partially, this exists because of the strength of institutional missions and differing student markets. But it also exists because smaller public campuses and most independent institutions have not been able to afford the basic technological infrastructure required by online learning.

It is a source of concern that many Maryland colleges and universities do not have the baseline equipment and services necessary for the fastest growing form of postsecondary education and training. If Maryland institutions of higher education are to be competitive with public and independent institutions in other states and with entrepreneurial institutions capable of serving global markets (*e.g.*, the University of Phoenix and the United States Open University), and with commercial purveyors of educational services, the technology gap among Maryland institutions must be overcome. If it is not, the State's workforce will be not be competitive with the workers in other states, and the Maryland economy will suffer in proportion to the unrealized potential of the workforce.

There are other aspects of the competitive environment of distance learning which are not covered in this study but have been reported in other studies by the Maryland Higher Education Commission---notably the *Higher Education Information Technology Study: A Comparison of*

State Funding for Statewide Initiatives (MHEC, August 2000). That study compared statewide initiatives to encourage and support distance learning in four areas:

Educational networks
Statewide virtual universities
Digital libraries
Campus infrastructure.

Whereas Maryland has provided specific and targeted support in the area of campus infrastructure, there has been no targeted and directed State initiative in the other areas.

MarylandOnline **and the** ***Maryland Digital Library*** **can help the institutions less active in distance learning achieve a more level playing field while also providing needed statewide services to the technology leaders. Such statewide "utilities," that provide services to all institutions, can assure that Maryland's higher education institutions have the necessary infrastructure of online services: an internationally recognizable website for all Maryland institutions, online student services, faculty technology training, and online access to library materials, e-journals and databases.**

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Table 1: Credit courses offered by Distance Learning (Duplicate courses included)
Four-Year Public Institutions

Institution Surveyed	Total # of Credit Courses Calendar 1997	Total # of Credit Courses Academic 1999-2000
Bowie State University	21	28
Coppin State College	0	15
Frostburg State University	16	17
Salisbury State University	0	0
Towson University	7	19
Univ. of Baltimore (UB)	13	16
UMBC (Baltimore County)	19	13
UMB (Baltimore)	16	77
UMCP (College Park)	37	60
UMES (Eastern Shore)	6	0
UMUC (University College)	216	536
Morgan State University	0	8
St.Mary's College	0	0
Total	351	789

Table 2: Credit courses offered by Distance Learning (Duplicate courses included)
Community Colleges

Institution Surveyed	Total # of Courses Calendar 1997	Total # of Courses Academic 1999-2000
COMMUNITY COLLEGES		
Allegany College of Maryland	48	55
Anne Arundel Community College	125	138
Baltimore City Community College	27	33
Carroll Community College	40	41
Community College of Baltimore Co.	113	155
Cecil Community College	0	5
Chesapeake College	50	49
College of Southern Maryland	77	88
Frederick Community College	37	52
Garrett Community College	8	9
Hagerstown Community College	13	25
Harford Community College	14	29
Howard Community College	110	127
Montgomery College	103	63
Prince Georges Community College	68	134
Wor-Wic Community College	4	10
Total	**837**	**1013**

Table 3: Credit courses offered by Distance Learning (Duplicate courses included)

Independent Institutions

Institution Surveyed	Total # of Credit Courses Calendar Year 1997	Total # of Credit Courses Academic Year 1999-2000
INDEPENDENTS		
Baltimore Hebrew University	0	0
Baltimore International College	0	0
Binah Institue of Adv. Judaic Studies	—	0
Capitol College	11	31
Columbia Union	NR	200
Goucher College	16	49
Hagerstown Business College	0	2
Seafarers Harry Lundeberg School	0	0
Hood College	0	0
Johns Hopkins University	23	45
Loyola College	1	0
Maryland College of Art & Design	0	0
Maryland Institute, College of Art	6	2
Mount St.Mary's College	0	0
National Labor College	—	0
Ner Israel Rabbinical College	0	0
College of Notre Dame of MD	0	0
St.John's College	0	0
St.Mary's Seminary & University	0	0
Sojourner Douglass College	0	NR
Traditional Acupuncture Institute	0	0
Villa Julie College	0	0
Washington Bible College	0	0
Washington College	0	0
Western Maryland College	0	5
Yeshiva College	–	0
Total	57	334

Table 4: Credit Courses offered by Distance Learning (Duplicate courses included)
Summary Table

Institution Surveyed	Total # of Credit Courses Calendar 1997	Total # of Credit Courses Academic Year 1999-2000
UMUC (University College)	216	536
Other Four Year Public Institutions	135	252
Community Colleges	837	1013
Independent Institutions	57	334
Total	1245	2135

Table 5: Non-Credit Courses Offered by Distance Learning (Duplicate courses included)
Four-Year Public Institutions

Institution Surveyed	Total # of Non-CreditCourses Calendar 1997	Total # of Non-CreditCourses Academic Year 1999-2000
FOUR-YEAR PUBLICS		
Bowie State University	0	0
Coppin State College	0	0
Frostburg State University	0	0
Salisbury State University	0	0
Towson University	1	0
Univ. of Baltimore (UB)	0	0
UMBC (Baltimore County)	3	0
UMB	0	4
UMCP (College Park)	17	0
UMES (Eastern Shore)	0	0
UMUC (University College)	1	12
Morgan State University	0	0
St.Mary's College	0	0
Total	**22**	**16**

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Table 6: Non-Credit Courses Offered by Distance Learning (Duplicate courses included)
Community Colleges

Institution Surveyed	Total # of Non-Credit Courses Calendar Year 1997	Total # of Non-Credit Courses Academic Year 1999-2000
COMMUNITY COLLEGES		
Allegany College of Maryland	51	12
Anne Arundel Community College	10	86
Baltimore City Community College	0	0
Carroll Community College	5	43
Community College of Baltimore Co	0	0
Cecil Community College	0	0
Chesapeake College	0	0
College of Southern Maryland	4	3
Frederick Community College	0	132
Garrett Community College	3	0
Hagerstown Community College	3	19
Harford Community College	0	16
Howard Community College	2	45
Montgomery College	11	29
Prince Georges Community College	9	9
Wor-Wic Community College	0	0
Total	98	394

Table 7: Non-Credit Courses Offered by Distance Learning (Duplicate courses included)
Independent Institutions

Institution Surveyed	Total # of Non-Credit Courses Calendar Year 1997	Total # of Non- Credit Courses Academic Year 1999-2000
INDEPENDENTS		
Baltimore Hebrew University	0	5
Baltimore International College	0	0
Binah Institute of Adv Judaic Studies		
Capitol College	0	0
Columbia Union	NR	0
Goucher College	0	0
Hagerstown Business College	0	0
Hood College	0	0
Johns Hopkins University	0	0
Loyola College	2	0
Maryland College of Art & Design	0	0
Maryland Institute; College of Art	6	4
Mount St.Mary's College	0	0
National Labor College	--	0
Ner Israel Rabbinical College	0	0
College of Notre Dame of MD	0	0
Seafarers School of Seamanship	0	0
St.John's College	0	0
St.Mary's Seminary & University	0	0
Sojourner Douglass	0	0
Traditional Acupuncture Institute	0	0
Villa Julie College	0	0
Washington Bible College	0	0
Washington College	0	0
Western Maryland College	0	0
Yeshiva College	--	0
Total	8	9

Table 8: Non-Credit Courses Offered by Distance Learning
(Duplicate courses included)

Summary Table

Institutions Surveyed	Total # of Courses Calendar 1997	Total # of Courses Academic Year 1999-2000
UMUC (University College)	1	12
Four Year Public Institutions	21	4
Community Colleges	98	394
Independent Institutions	8	9
Total	128	419

Table 9: Enrollments in Distance Learning Credit Courses
Four-Year Public Institutions

Institution Surveyed	Total # of Credit Enrollments Calendar Year 1997	Total # of Credit Enrollments Academic Year 1999-2000
FOUR-YEAR PUBLICS		
Bowie State University	422	773
Coppin State College	0	356
Frostburg State University	182	489
Salisbury State University	0	NR
Towson University	162	269
Univ. of Baltimore (UB)	59	461
UMBC (Baltimore County)	0	156
UMB	178	520
UMCP (College Park)	169	259
UMES (Eastern Shore)	81	0
UMUC (University College)	11,687	3,1424
Morgan State University	0	84
St.Mary's College	0	0
Total	12,940	34,791

Table 10: Enrollments in Distance Learning Credit Courses
Community Colleges

Institution Surveyed	Total # of Credit Enrollments Calendar Year 1997	Total # of Credit Enrollments Academic Year 1999-2000
COMMUNITY COLLEGES		
Allegany College of Maryland	750	852
Anne Arundel Community College	3007	3588
Baltimore City Community College	497	357
Carroll Community College	477	334
Community College of Baltimore Co.	1887	1995
Cecil Community College	0	38
Chesapeake College	832	775
College of Southern Maryland	1908	2775
Frederick Community College	544	161
Garrett Community College	110	135
Hagerstown Community College	210	260
Harford Community College	162	442
Howard Community College	1639	1379
Montgomery College	1686	695
Prince Georges Community College	2056	2086
Wor-Wic Community College	57	187
Total	15822	16059

Table 11: Enrollments in Distance Learning Credit Courses
Independent Institutions

Institution Surveyed	Total # of Credit Enrollments Calendar Year 1997	Total # of Credit Enrollments Academic Year 1999-2000
INDEPENDENTS		
Baltimore Hebrew University	0	0
Baltimore International College	0	0
Binah Institute of Adv Judaic Studies	--	0
Capitol College	58	458
Columbia Union)	NR	270
Goucher College	66	167
Hagerstown Business College	0	14
Hood College	0	0
Johns Hopkins University	505	1327
Loyola College	12	0
Maryland College of Art & Design	0	0
Maryland Institute; College of Art	12	30
Mount St.Mary's College	0	0
National Labor College	---	0
Ner Israel Rabbinical College	0	0
College of Notre Dame of MD	0	0
Seafarers School of Seamanship	0	0
St.John's College	0	0
St.Mary's Seminary & University	0	0
Sojourner Douglass	0	0
Traditional Acupuncture Institute	0	0
Villa Julie College	0	0
Washington Bible College	0	0
Washington College	0	0
Western Maryland College	0	78
Yeshiva College	---	0
Total	653	2344

Table 12: Enrollments in Distance Learning Credit Courses Delivered by All Technologies

Summary Table

	Total # of Credit Enrollments Calendar Year 1997	Total # of Credit Enrollments Academic Year 1999-2000
UMUC (University College)	11,687	31,424
Other Public 4-Years	1,253	3,367
Community Colleges	15,822	16059
Independent Institutions	653	2,344
Total	29,415	53,194

Table 13: Enrollments in Distance Learning Non-Credit Courses
Four-Year Public Institutions

Institution Surveyed	Total # of Non-Credit Enrollments Calendar 1997	Total # of Non-Credit Enrollments Academic Year 1999-2000
FOUR-YEAR PUBLICS		
Bowie State University	0	0
Coppin State College	0	0
Frostburg State University	0	0
Salisbury State University	0	0
Towson University	30	0
Univ. of Baltimore (UB)	0	0
UMBC (Baltimore County)	0	0
UMB	0	68
UMCP (College Park)	0	0
UMES (Eastern Shore)	0	0
UMUC (University College)	32	0
Morgan State University	0	0
St.Mary's College	0	0
Total	62	68

Table 14: Enrollments in Distance Learning Non-Credit Courses
Community Colleges

Institution Surveyed	Total # of Non-Credit Enrollments Calendar 1997	Total # of Non-Credit Enrollments Academic Year 1999-2000
COMMUNITY COLLEGES		
Allegany College of Maryland	310	65
Anne Arundel Community College	0	223
Baltimore City Community College	0	0
Carroll Community College	11	154
Community College of Baltimore Co	0	0
Cecil Community College	0	0
Chesapeake College	0	0
College of Southern Maryland	12	57
Frederick Community College	0	375
Garrett Community College	29	0
Hagerstown Community College	41	98
Harford Community College	0	45
Howard Community College	18	271
Montgomery College	95	567
Prince Georges Community College	125	154
Wor-Wic Community College	0	0
Total	641	2009

Table 15: Enrollments in Distance Learning Non-Credit Courses
Independent Institutions

Institution Surveyed	Total # of Non-Credit Enrollments Calendar Year 1997	Total # of Non-Credit Enrollments Academic Year 1999-2000
INDEPENDENTS		
Baltimore Hebrew University	0	13
Baltimore International College	0	0
Binah Institute of Adv Judaic Studies	---	0
Capitol College	0	0
Columbia Union (No Response)	---	0
Goucher College	0	0
Hagerstown Business College	0	0
Hood College	0	0
Johns Hopkins University	0	0
Loyola College	310	0
Maryland College of Art & Design	0	0
Maryland Institute, College of Art	41	0
Mount St.Mary's College	0	0
National Labor College	---	0
Ner Israel	0	0
College of Notre Dame of MD	0	0
Seafarers School of Seamanship	0	0
St.John's College	0	0
St.Mary's Seminary & University	0	0
Sojourner Douglass	0	0
Traditional Acupuncture Institute	0	0
Villa Julie College	0	0
Washington Bible College	0	0
Washington College	0	0
Western Maryland College	0	0
Yeshiva College	---	0
Total	**351**	**13**

Table 16: Enrollments in Distance Learning Non-Credit Courses

Summary Table

Segments	Total # of Non-Credit Enrollments Calendar Year 1997	Total # of Non-Credit Enrollments Academic Year 1999-2000
UMUC (University College)	32	NR
Other Four-Year Public Institutions	30	68
Community Colleges	641	2009
Independent Institutions	351	13
Total	1054	2090

Table 17: Primary Mode for Distance Learning Courses: Online Courses
Four-Year Public Institutions

Institution Surveyed	# of asynchronous online courses		# of 2-way online, courses	
	Cal. Year 1997	Acad. Yr 1999-2000	Cal. Year 1997	Acad. Yr 1999-2000
FOUR-YEAR PUBLICS				
Bowie State University	0	4	0	0
Coppin State College	0	7	0	3
Frostburg State University	0	7	0	0
Salisbury State University	0	0	0	0
Towson University	0	2	0	0
Univ. of Baltimore (UB)	0	0	0	0
UMBC (Baltimore County)	0	0	0	0
UMB (Baltimore)	0	8	0	4
UMCP (College Park)	0	0	0	0
UMES (Eastern Shore)	0	0	0	0
UMUC (University College)	55	451	0	0
Morgan State University	0	8	0	0
St Mary's College	0	0	0	0
Total	**55**	**487**	**0**	**7**

Table 18: Primary Mode of Delivery for Distance Learning Courses: Online Course

Community Colleges

Institution Surveyed	# of asynchronous online courses		# of 2-way online courses	
	Cal. Year 1997	Acad. Yr 1999-2000	Cal. Year 1997	Acad. Yr 1999-2000
COMMUNITY COLLEGES				
Allegany College of Maryland	0	7	0	0
Anne Arundel Community College	6	143	0	0
Baltimore City Community College	0	4	0	0
Carroll Community College	6	25	0	0
Community College of Baltimore Co.	3	95	0	0
Cecil Community College	0	1	0	0
Chesapeake College	1	6	0	0
College of Southern Maryland	0	20	0	0
Frederick Community College	0	0	0	0
Garrett Community College	0	5	0	0
Hagerstown Community College	0	23	0	0
Harford Community College	0	31	0	0
Howard Community College	2	49	21	0
Montgomery College	51	48	2	12
Prince Georges Community College	10	58	1	0
Wor-Wic Community College	0	0	0	0
Total	**79**	**515**	**24**	**12**

Table 19: Primary Mode of Delivery for Distance Learning Courses: Online Courses

Independent Institutions

Institution Surveyed	# of asynchronous online		# of 2-way online, computer-based	
	Calendar 1997	Acad. Yr 1999-2000	Calendar 1997	Acad. Yr 1999-2000
INDEPENDENTS				
Baltimore Hebrew University	2	2	0	2
Baltimore International College	0	0	0	0
Binah Institute for Judaic Studies	--	0	---	0
Capitol College	4	0	0	28
Columbia Union		0		0
Goucher College	1	49		0
Hagerstown Business College	0	2	0	0
Hood College	0	0	0	0
Johns Hopkins University	14	7	0	0
Loyola College	0	0	0	0
Maryland College of Art & Design	0	0	0	0
Maryland Institute, College of Art	0	2	6	0
Mount St.Mary's College	0	0	0	0
National Labor College	---	0	---	0
Ner Israel Rabbinical College	0	0	0	0
College of Notre Dame of MD	0	0	0	0
Seafarers School of Seamanship	0	0	0	0
St.John's College	0	0	0	0
St.Mary's Seminary & University	0	0	0	0
Sojourner Douglass	0	0	0	0
Traditional Acupuncture Institute	0	0	0	0
Villa Julie College	0	0	0	0
Washington Bible College	0	0	0	0
Washington College	0	0	0	0
Western Maryland College	0	5	0	0
Yeshiva College	---	0	---	0
Total	**19**	**67**	**6**	**30**

Table 20: Primary Mode of Delivery for Distance Learning Courses: Online Courses
Summary Table

	# of asynchronous online courses, 1997 and Academic Year 1999-2000		# of 2-way online courses 1997 and Academic Year 1999-2000	
	1997	**1999-2000**	**1997**	**1999-2000**
UMUC (University College)	55	**451**	0	**0**
Other Four Year Public Institutions	0	**35**	0	**7**
Community Colleges	79	**514**	24	**12**
Independent Colleges	19	**67**	6	**29**
Total	153	**1,067**	30	**48**

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Table 21: Primary Mode of Delivery for Distance Learning Courses: Video

Four-Year Public Institutions

Institution Surveyed	# of 2-way Interactive Video and Audio		# of 1-way live video, one-way audio		# of 1-way pre-recorded video	
FOUR-YEAR PUBLICS	**Calendar 1997**	**Acad. Year 1999-2000**	**Calendar 1997**	**Acad. Year 1999-2000**	**Calendar 1997**	**Acad. Year 1999-2000**
Bowie State University	6	8	0	0	15	16
Coppin State College	0	4	0	0	0	4
Frostburg State University	16	10	0	0	0	0
Salisbury State University	0	0	0	0	0	0
Towson University	8	17	0	0	0	0
Univ. of Baltimore (UB)	13	3	0	0	0	35
UMBC (Baltimore County)	11	0	0	3	4	0
UMB (Baltimore)	14	68	0	0	2	0
UMCP (College Park)	0	13	0	3	0	18
UMES (Eastern Shore)	6	0	0	0	0	0
UMUC (University College)	35	28	0	178	0	0
Morgan State University	0	0	0	0	0	0
St.Mary's College	0	0	0	0	0	0
Total	109	151	0	184	21	73

Table 22: Primary Mode of Delivery for Distance Learning Courses: Video

Community Colleges

Institution Surveyed	# of 2-way Interactive Video or Audio		# of 1-way live video, one-way audio		# of 1-way prerecord. video	
	Calendar 1997	Acad. Year 1999-2000	Calendar 1997	Acad. Year 1999-2000	Calendar 1997	Acad. Year 1999-2000
COMMUNITY COLLEGES						
Allegany College of Maryland	35	44	0	0	13	23
Anne Arundel Community College	23	32	0	0	115	36
Baltimore City Community College	4	4	12	0	5	13
Carroll Community College	5	5	0	5	30	16
Community College of Baltimore Co.	18	14	3	46	31	0
Cecil Community College	0	0	0	0	0	4
Chesapeake College	30	29	0	0	15	14
College of Southern Maryland	34	24	0	0	47	43
Frederick Community College	0	0	0	30	37	154
Garrett Community College	11	4	0	0	0	0
Hagerstown Community College	7	11	1	1	8	8
Harford Community College	2	5	0	0	24	9
Howard Community College	19	0	0	0	70	23
Montgomery College	4	16	0	9	28	20
Prince Georges Community College	15	8	0	0	25	72
Wor-Wic Community College	0	0	0	0	2	6
Total	207	196	16	90	472	440

Table 23: Primary Mode of Delivery for Distance Learning Courses: Video

Independent Institutions

Institution Surveyed	# of 2-way Interactive Video or Audio		# of 1-way live video, one-way audio		# of 1-way prerecord. video	
	Calendar 1997	Academic Year 1999-2000	Calendar 1997	Academic Year 1999-2000	Calendar 1997	Academic Year 1999-2000
INDEPENDENTS						
Baltimore Hebrew University	0	0	0	0	0	0
Baltimore International College	0	0	0	0	0	0
Binah Institute of Adv Judaic Studies	---	0	---	0	---	0
Capitol College	7	3	0	0	0	0
Columbia Union	0	0		0		0
Goucher College	0	0		0		0
Hagerstown Business College	0	0	0	0	0	0
Hood College	0	0	0	0	0	0
Johns Hopkins University	9	12	0	0	0	0
Loyola College	3	0	0	0	0	0
Maryland College of Art & Design	0	0	0	0	0	0
Maryland Institute, College of Art	0	0	0	0	0	0
Mount St.Mary's College	0	0	0	0	0	0
National Labor College	---	0	---	0	---	0
Ner Israel Rabbinical College	0	0	0	0	0	0
College of Notre Dame of MD	0	0	0	0	0	0
Seafarers School of Seamanship	0	0	0	0	0	0
St.John's College	0	0	0	0	0	0
St.Mary's Seminary & University	0	0	0	0	0	0
Sojourner Douglass	0	0	0	0	0	0
Traditional Acupuncture Institute	0	0	0	0	0	0
Villa Julie College	0	0	0	0	0	0
Washington Bible College	0	0	0	0	0	0
Washington College	0	0	0	0	0	0
Western Maryland College	0	0	0	0	0	0
Yeshiva College	---	0	---	0	---	0
Total	19	15	0	0	0	0

Table 24: Primary Mode of Delivery for Distance Learning Courses: Video

Summary Table

	# of 2-way Interactive Video and Audio		# of 1-way live video, one-way audio		# of 1-way prerecord. video	
	Calendar 1997	Acad. Year 1999-2000	Calendar 1997	Acad. Year 1999-2000	Calendar 1997	Acad. Year 1999-2000
UMUC (University College)	35	**28**	0	**178**	0	**0**
Four Year Colleges	74	**123**	0	**6**	21	**73**
Community Colleges	207	**196**	16	**90**	472	**440**
Independent Colleges	19	**15**	0	**0**	0	**0**
Total	335	**362**	16	**274**	493	**513**

Table 25: Courses Delivered by Video to Certain Sites, Academic Year 1999-2000

Four-Year Public Institutions

Institution Surveyed	# at branch campus, off-campus center	# at public 4-year college or university	# at community college	# at public secondary school	# at private sector workplace	# at state agency site	# at a military base	# at other sites
FOUR-YEAR PUBLICS								
Bowie State University	8	0	8	0	0	0	0	8
Coppin State College	0	0	0	5	0	0	0	10
Frostburg State Univ.	10	0	0	0	0	0	0	0
Salisbury State University	0	0	0	0	0	0	0	0
Towson University	0	7	2	4	0	0	0	5
Univ. of Baltimore (UB)	0	0	3	0	0	0	0	0
UMBC (Baltimore Co.)	0	0	0	0	0	0	0	3
UMB (Balitmore)	1	15	20	0	0	0	0	77
UMCP (College Park)	8	18	3	0	2	21	10	0
UMES (Eastern Shore)	0	0	0	0	0	0	0	0
UMUC (Univ. College)	67	68	34	0	33	0	55	0
Morgan State University	8	0	0	0	0	0	0	0
St.Mary's College	0	0	0	0	0	0	0	0
Total	**102**	**108**	**70**	**9**	**35**	**21**	**65**	**103**

Table 26: Courses Delivered by Video to Certain Sites, Academic Year 1999-2000

Community Colleges

Institution Surveyed	# at a Branch Campus/ off-campus center	# at public 4-year college or university	# at community college	# at public secondary school	# at private sector workplace	# at state agency site	# at a military base	# at other sites in MD
COMMUNITY COLLEGES								
Allegany College of Maryland	1	15	0	0	0	0	0	6
Anne Arundel Comm College	20	0	32	0	0	0	0	
Baltimore City Comm College	0	2	9	0	0	0	0	
Carroll Community College	0	0	5	0	0	0	0	
Comm. College of Baltimore Co.	14	0	12	0	0	0	0	
Cecil Community College	0	0	0	0	0	0	0	
Chesapeake College	29	0	0	10	0	0	0	
College of Southern Maryland	20	0	4	0	0	0	0	
Frederick Community College	0	0	7	0	0	0	0	
Garrett Community College	0	0	5	4	0	0	0	
Hagerstown Community College	0	0	10	1	0	0	0	2
Harford Community College	0	0	5	0	0	0	0	
Howard Community College	0	0	11	1	0	0	0	
Montgomery College	24	0	5	0	0	0	0	
Prince Georges Comm College	0	0	8	0	0	0	0	
Wor-Wic Community College	0	0	0	0	0	0	0	
Total	**108**	**17**	**113**	**16**	**0**	**0**	**0**	**8**

Table 27: Courses Delivered by Video to Certain Sites, Academic Year 1999-2000

Independent Institutions

Institution Surveyed	# at a branch campus, off-campus center	# at public 4-year college or university	# at community college	# at public secondary school	# at private sector workplace	# at state agency site	# at a military base	# at other sites
INDEPENDENTS								
Baltimore Hebrew University	0	0	0	0	0	0	0	0
Baltimore International College	0	0	0	0	0	0	0	0
Binah Institute of Adv Judaic Studies	0	0	0	0	0	0	0	0
Capitol College	0	0	2	0	0	0	0	1
Columbia Union (No Response)	0	0	0	0	0	0	0	0
Goucher College	0	0	0	0	0	0	0	0
Hagerstown Business College	0	0	0	0	0	0	0	0
Hood College	0	0	0	0	0	0	0	0
Johns Hopkins University	7	0	0	0	0	1	0	4
Loyola College	0	0	0	0	0	0	0	0
Maryland College of Art & Design	0	0	0	0	0	0	0	0
Maryland Institute, College of Art	0	0	0	0	0	0	0	0
Mount St Mary's College	0	0	0	0	0	0	0	0
National Labor College	0	0	0	0	0	0	0	0
Ner Israel Rabbinical College	0	0	0	0	0	0	0	0
College of Notre Dame of MD	0	0	0	0	0	0	0	0
Seafarers School of Seamanship	0	0	0	0	0	0	0	0
St.John's College	0	0	0	0	0	0	0	0
St Mary's Seminary & University	0	0	0	0	0	0	0	0
Sojourner Douglass	0	0	0	0	0	0	0	0
Traditional Acupuncture Institute	0	0	0	0	0	0	0	0
Villa Julie College	0	0	0	0	0	0	0	0
Washington Bible College	0	0	0	0	0	0	0	0
Washington College	0	0	0	0	0	0	0	0
Western Maryland College	0	0	0	0	0	0	0	0
Yeshiva College	0	0	0	0	0	0	0	0
Total	**7**	**0**	**2**	**0**	**0**	**1**	**0**	**5**

Table 28: Courses Delivered by Video to Certain Sites,
Academic Year 1999-2000 Compared to Calendar Year 1997
Summary Table

	# at a Branch Campus/ off-campus center		# at public 4-year college or university		# at community college		# at public secondary school		# at private sector workplace		# at state agency site		# at a military base		# at other sites	
Segments	1997	99-00	1997	99-00	1997	99-00	1997	99-00	1997	99-00	1997	99-00	1997	99-00	1997	99-00
UMUC	39	**67**	0	**68**	0	**34**	0	**0**	1	**33**	0	**0**	0	**55**	1	**0**
Other 4 Year Public Institutions	40	**35**	11	**40**	6	**36**	6	**9**	1	**2**	0	**21**	6	**10**	26	**103**
Community Colleges	129	**108**	5	**17**	83	**113**	29	**16**	0	**0**	0	**0**	1	**0**	49	**8**
Independent Institutions	12	**7**	3	**0**	10	**2**	2	**0**	0	**0**	0	**1**	0	**0**	1	**5**
Total	220	**217**	19	**125**	99	**185**	37	**25**	2	**35**	0	**22**	7	**65**	76	**116**

Table 29: Development of Course Content

Four-Year Public Institutions

Institution Surveyed	# developed by faculty at the institution	# developed by another higher education institution	# developed in collaboration with another institution	# developed by a commercial vendor	Other developer
FOUR-YEAR PUBLICS					
Bowie State University	12	0	0	0	16
Coppin State College	15	0	0	0	0
Frostburg State University	17	0	0	0	0
Salisbury State University	0	0	0	0	0
Towson University	19	0	0	0	0
Univ. of Baltimore (UB)	16	0	0	0	0
UMBC (Baltimore County)	13	0	0	0	0
UMB (Baltimore)	77	0	0	0	1
UMCP (College Park)	60	0	0	0	0
UMES (Eastern Shore)	0	0	0	0	0
UMUC (University College)	548	0	0	0	0
Morgan State University	8	0	0	0	0
St.Mary's College	0	0	0	0	0
Total	**785**	**0**	**0**	**0**	**17**

Table 30: Development of Course Content

Community Colleges

Institution Surveyed	# developed by faculty at the institution	# developed by another higher education institution	# developed in collaboration w/another institution	# developed by a commercial vendor	Other
COMMUNITY COLLEGES					
Allegany College of Maryland	46	4	1	18	0
Anne Arundel Community College	155	29	11	29	0
Baltimore City Community College	6	7	1	0	13
Carroll Community College	14	10	1	59	0
Comm. College of Baltimore Co	74	12	0	9	0
Cecil Community College	0	1	0	4	0
Chesapeake College	37	0	0	12	0
College of Southern Maryland	83	8	0	0	0
Frederick Community College	15	7	0	162	0
Garrett Community College	9	0	0	0	0
Hagerstown Community College	13	0	0	13	0
Harford Community College	49	4	0	0	0
Howard Community College	50	0	0	33	5
Montgomery College	42	10	0	35	0
Prince Georges Community College	53	19	0	71	0
Wor-Wic Community College	4	0	0	6	0
Total	**650**	**111**	**14**	**451**	**18**

Table 31: Development of Course Content

Independent Institutions

Institution Surveyed	# developed by faculty at the Institution	# developed by another higher education institution	# developed in collaboration w/another institution	# developed by a commercial vendor	Other
INDEPENDENTS					
Baltimore Hebrew University	2	0	0	0	0
Baltimore International College	0	0	0	0	0
Binah Institute of Adv.Judaic Studies	0	0	0	0	0
Capitol College	31	0	0	0	0
Columbia Union College	53	3	0	0	44
Goucher College	49	0	0	0	0
Hagerstown Business College	0	0	0	0	0
Hood College	0	0	0	0	0
Johns Hopkins University	0	0	0	0	0
Loyola College	45	0	0	0	0
Maryland College of Art & Design	0	0	0	0	0
Maryland Institute, College of Art	6	0	0	0	0
Mount St.Mary's College	0	0	0	0	0
National Labor College	0	0	0	0	0
Ner Israel	0	0	0	0	0
College of Notre Dame of MD	0	0	0	0	0
Seafarers School of Seamanship	0	0	0	0	0
St.John's College	0	0	0	0	0
St.Mary's Seminary & University	0	0	0	0	0
Sojourner Douglass	0	0	0	0	0
Traditional Acupuncture Institute	0	0	0	0	0
Villa Julie College	0	0	0	0	0
Washington Bible College	0	0	0	0	0
Washington College	0	0	0	0	0
Western Maryland College	5	0	0	0	0
Yeshiva College	0	0	0	0	0
Total	**191**	**3**	**0**	**0**	**44**

Table 32: Development of Course Content

Summary Table

	# developed by faculty at the institution		# developed by another higher education institution		# developed in collaboration w/ another institution		# developed by a commercial vendor		Other	
Segments	1997	**'99-'00**	1997	**'99-'00**	1997	**'99-'00**	1997	**'99-'00**	1997	**'99-'00**
UMUC	32	**548**	32	**0**	0	**0**	0	**0**	0	**0**
Four Year Public Institutions	103	**237**	0	**0**	8	**0**	19	**0**	2	**17**
Community Colleges	292	**650**	38	**111**	2	**14**	283	**451**	96	**18**
Independent Institutions	36	**191**	0	**3**	1	**0**	0	**0**	0	**44**
Total	463	**1626**	70	**114**	11	**14**	302	**451**	98	**79**

Table 33: Number of Programs Offered by Distance Education
Four-Year Public Institutions

Institution Surveyed	*Entire* Programs Possible by Distance Education Courses	Programs Offered *Primarily* by Distance Education (75% or more of courses)	Number of Programs Offered Primarily or Entirely by Distance Education	Program Name	*Program Level* Certificate	Associate	Bachelor's	Master's
FOUR-YEAR PUBLICS								
Bowie State University	1		1	B. S. of Technology			1	
Coppin State College	1	1	2	M.Ed. in Special Education M.Ed. in Curriculum and Instruction				2
Frostburg State University								
Salisbury University	NR	NR						
Towson University								
Univ. of Baltimore (UB)	1		1	M. of Business Administration				1
UMBC (Baltimore County)	2	1	3	M. of Management Studies in EHS Certif. In Instructional Sys. Design Certif. In Distance Education	2			1
UMB (Baltimore)								
UMCP (College Park)		2	2	M. of Eng. Reliability M. of Fire Protection Engineering				2
UMES (Eastern Shore)								
UMUC (University College)	24		24	Bachelor Accounting Behavioral & Soc.Sci. Bus. & Management Communication Studies Comp. & Inform.Science Computer Studies English Environmental Mgmt. Fire Science Humanities Inform.Sys. Mgmt Management Studies Paralegal Studies Psychology Master Comp. Sys. Mgmt Envir. Management Inform. Technology Management Technology Mgmt Telecom. Mgmt M. of Business Adm. Software Engineering International Mgmt Distance Education			14	10
Morgan State University								
St.Mary's College								
Total	**29**	**4**	**33**		**2**	**0**	**15**	**16**

Table 34: Number of Programs Offered by Distance Education

Community Colleges

Institution Surveyed	*Entire* Programs Possible by Distance Education Courses	Programs Offered *Primarily* by Telecommunications (75% or more of courses)	Number of Programs Offered Primarily or entirely by Distance Education	Program Name		Program Level			
						Certificate	Associate	Bachelor	Master
COMMUNITY COLLEGES									
Allegany College of Maryland									
Anne Arundel Community College	1	5	6	Business Mgmt Business Admin General Studies	Computer Sci Fin. Accounting Mgmt Info. Sys		6		
Baltimore City Community College									
Carroll Community College		2	2	Arts & Sciences General Studies			2		
Cecil Community College									
Chesapeake College									
College of Southern Maryland	3		3	Arts & Sciences General Studies Arts & Humanties			3		
Comm. Coll. Of Baltimore Co.									
Frederick Community College									
Garrett Community College									
Hagerstown Community College									
Harford Community College									
Howard Community College	3		3	General Studies Liberal Arts Business Administration			3		
Montgomery College									
Prince Georges Community College	1	1	2	General Management Certificate General Education Certificate		2			
Wor-Wic Community College									
Total	8	8	16			2	14		

Table 35: Number of Programs Offered by Distance Education

Independent Institutions

Institution Surveyed	*Entire* Programs Possible by Distance Education Courses	Programs Offered *Primarily* by Telecommunications (75% or more of courses)	Number of Programs Offered Primarily or Entirely by Distance Education	Program Name	Program Level			
					Certificate	Associate	Bachelor	Master
INDEPENDENTS								
Baltimore Hebrew University								
Baltimore International College								
Binah Inst. of Adv Judaic Studies								
Capitol College	1		1	Electrical Commerce Management			1	
Columbia Union								
Goucher College		3	3	M.A., Historic Preservation M.A., Arts Administration MFA in Creative Non-Fiction				3
Hagerstown Business College								
Hood College								
Johns Hopkins University		1	1	Master of Public Helath				1
Loyola College								
Maryland College of Art & Design								
Maryland Institute, College of Art								
Mount St Mary's College								
National Labor College								
Ner Israel Rabbinical College								
College of Notre Dame of MD								
Seafarers School of Seamanship								
St John's College								
St Mary's Seminary & University								
Sojourner Douglass	NR	NR						
Traditional Acupuncture Institute								
Villa Julie College								
Washington Bible College								
Washington College								
Western Maryland College								
Yeshiva College								
Total	1	4	5				1	4

Table 36: Number of Degree Programs Offered by Distance Education

Summary Table

	Number of Institutions Offering *Entire* Degree Programs by Distance Education		Number of Entire Degree Programs Offered by Distance Education		Number of Degree Programs Offered Entirely or Primarily by Distance Education		Number of Degree Programs at Each Degree Level Offered Entirely or Primarily by DE during Academic 1999-2000		
	1997	**'99-'00**	1997	**'99-'00**	1997	**'99-'00**	**Assoc.**	**Bach.**	**Master**
UMUC			**4**	**24**	4	**24**		14	10
Four Year Public Institutions	2	**4**	2	**3**	4	**7**		1	6
Community Colleges	3	**3**	3	**7**	6	**14**	14		
Independent Institutions	1	**1**	1	**1**	3	**5**		1	4
Total	6	**8**	10	**35**	17	**50**	**14**	**16**	**20**

Table 37: Membership in MarylandOnline and the Maryland Digital Library
Four-Year Public Institutions

Institution Surveyed	MarylandOnline	Maryland Digital Library
FOUR-YEAR PUBLICS		
Bowie State University		X
Coppin State College		X
Frostburg State University		X
Salisbury University		X
Towson University	X	X
Univ. of Baltimore (UB)	X	X
UMBC (Baltimore County)	X	X
UMB (Baltimore)		X
UMCP (College Park)		X
UMES (Eastern Shore)	X	X
UMUC (University College)	X	X
Morgan State University	X	X
St.Mary's College		X
Total	**6**	**13**

Table 38: Membership in MarylandOnline and the Maryland Digital Library
Community Colleges

Institution Surveyed	Live Interactive Video Networks	
	MarylandOnline	Maryland Digital Library
COMMUNITY COLLEGES		
Allegany College of Maryland		X
Anne Arundel Community College	X	X
Baltimore City Community College	X	X
Carroll Community College	X	X
Cecil Community College	X	X
Chesapeake College	X	X
Comm. College of Baltimore County	X	X
College of Southern Maryland	X	X
Frederick Community College	X	X
Garrett Community College	X	X
Hagerstown Community College		X
Harford Community College	X	X
Howard Community College	X	
Montgomery College	X	X
Prince Georges Community College	X	X
Wor-Wic Community College	X	X
Total	14	15

Table 39: Membership in MarylandOnline and the Maryland Digital Library
Independent Institutions

Institution Surveyed	MarylandOnline	Maryland Digital Library
INDEPENDENTS		
Baltimore Hebrew University		
Baltimore International College		
Binah Inst. Of Adv. Judaic Studies		
Capitol College	X	
Columbia Union (No Response)		X
Goucher College		
Hagerstown Business College		X
Hood College		
Johns Hopkins University		X
Loyola College		
Maryland College of Art & Design		
Maryland Institute, College of Art		X
Mount St.Mary's College		
National Labor College		
Ner Israel Rabbinical College		
College of Notre Dame of MD		
Seafarers School of Seamanship		
St.John's College		
St.Mary's Seminary & University		
Sojourner Douglass		
Traditional Acupuncture Institute		
Villa Julie College		
Washington Bible College		
Washington College		
Western Maryland College	X	X
Yeshiva College		
Total	2	5

Table 40: Membership in MarylandOnline and the Maryland Digital Library
Summary Table

	Total Number of Institutions	MarylandOnline	Maryland Digital Library
Segments			
Four Year Public Institutions	13	6	13
Community Colleges	16	14	15
Independent Institutions	27	2	5
Total	**56**	**22**	**33**

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Table 41: Number of Distance Learning Courses/Activities by Primary Audience

Four-Year Public Institutions

Institution Surveyed	Under-graduate	Graduate	Prof. Con.Educ. Students	Other Con.Educ. Students	High School Students
FOUR-YEAR PUBLICS					
Bowie State University	25	3	0	0	0
Coppin State College	4	8	3	0	0
Frostburg State University	5	12	0	0	0
Salisbury University	NR	NR	0	0	0
Towson University	16	3	0	0	0
Univ. of Baltimore (UB)	4	12	0	0	0
UMBC (Baltimore County)	3	10	0	0	0
UMB (Baltimore)	24	48	4	1	0
UMCP (College Park)	13	42	0	0	0
UMES (Eastern Shore)	0	0	0	0	0
UMUC (University College)	388	160	0	0	0
Morgan State University	7	1	0	0	0
St.Mary's College	0	0	0	0	0
Total	**455**	**276**	**7**	**1**	**0**

Table 42: Number of Distance Learning Courses/Activities by Primary Audience
Community Colleges

Institution Surveyed	Under-graduate	Graduate	Prof. Con.Educ. Students	Other Con.Educ. Students	High School Students
COMMUNITY COLLEGES					
Allegany College of Maryland	55	0	6	6	0
Anne Arundel Comm. College	86	0	20	38	2
Baltimore City Comm. College	27	0	0	0	0
Carroll Community College	29	0	0	43	0
Cecil Community College	5	0	0	0	0
Chesapeake College	29	0	0	0	0
Comm. Coll. of Baltimore Co	0	0	0	0	0
College of Southern Maryland	88	0	3	0	0
Frederick Community College	52	0	0	132	0
Garrett Community College	9	0	0	0	0
Hagerstown Comm. College	17	0	3	16	0
Harford Community College	28	0	0	16	1
Howard Community College	82	0	0	45	0
Montgomery College	63	0	8	24	0
Prince Georges Comm. College	138	0	0	5	0
Wor-Wic Community College	0	0	0	0	0
Total	**708**	**0**	**40**	**325**	**3**

Table 43: Number of Distance Learning Courses/Activities by Primary Audience
Independent Institutions

Institution Surveyed	Under-graduate	Graduate	Prof. Con.Educ. Students	Other Con.Educ. Students	High School Students
INDEPENDENTS					
Baltimore Hebrew University	0	0	0	2	0
Baltimore International College	0	0	0	0	0
Binah Inst. Of Adv. Judaic Studies	0	0	0	0	0
Capitol College	18	13	0	0	0
Columbia Union (No Response)	100	0	0	0	0
Goucher College	0	40	9	0	0
Hagerstown Business College	0	0	0	0	0
Hood College	0	0	0	0	0
Johns Hopkins University	8	26	11	0	0
Loyola College	0	0	0	0	0
Maryland College of Art & Design	0	0	0	0	0
Maryland Institute, College of Art	2	0	0	4	0
Mount St Mary's College	0	0	0	0	0
National Labor College	0	0	0	0	0
Ner Israel Rabbinical College	0	0	0	0	0
College of Notre Dame of MD	0	0	0	0	0
Seafarers School of Seamanship	0	0	0	0	0
St John's College	0	0	0	0	0
St Mary's Seminary & University	0	0	0	0	0
Sojourner Douglass	0	0	0	0	0
Traditional Acupuncture Institute	0	0	0	0	0
Villa Julie College	0	0	0	0	0
Washington Bible College	0	0	0	0	0
Washington College	0	0	0	0	0
Western Maryland College	0	5	0	0	0
Yeshiva College	0	0	0	0	0
Total	**128**	**84**	**20**	**6**	**0**

Table 44: Number of Distance Learning Courses/Activities by Primary Audience
Summary Table

	Under-graduate	Graduate	Prof. Con.Educ. Students	Other Con.Educ. Students	High School Students
UMUC	388	160	0	0	0
Other 4 Year Public Institutions	67	116	7	1	0
Community Colleges	708	0	40	325	0
Independent Institutions	128	84	20	6	0
Total	**1291**	**360**	**67**	**332**	**0**

Table 45: Student Support Services Available for Distance Learning Students

Four-Year Public Institutions

√ = Available for all courses No = Not available ◆ = Available in some courses

Institution Surveyed	Telephone or Computerized Registration	Online academic advising	Online financial aid advising	Toll-free phone/e-mail Access to instructor	Toll free Phone/e-mail access to Tech staff	Online access to wide area network	Instructor visists to remote sites of video courses	TA/tutor/ Facilitator At remote sites of video courses
FOUR-YEAR PUBLICS								
Bowie State University	No	√	√	√	√	√	◆	◆
Coppin State College	No	◆	No	√	√	◆	◆	◆
Frostburg State Univ	No	No	√	√	√	◆	◆	◆
Salisbury University								
Towson University	√	No	No	No	No	√	√	
Univ. of Baltimore (UB)	√	No	√	√	√	√	◆	No
UMBC (Baltimore County)	√	No	√	√	√	√	◆	◆
UMB (Baltimore)	◆	◆	◆	◆			◆	◆
UMCP (College Park)	◆	No	No	√	◆	◆	◆	◆
UMES (Eastern Shore)	o							
UMUC (Univ. College)	√	√	√	√	√	No	◆	◆
Morgan State University	√	No	No	√	√	No	No	No
St Mary's College								
Totals: Available for all √	6	2	5	8	7	4	1	0
Available for some ◆	2	2	1	1	1	3	8	7
Not available *No*	2	6	4	1	1	2	1	2

Table 46: Student Support Services Available for Distance Learning Students

Community Colleges

√ = Available for all courses No = Not available ◆ = Available in some courses

Institution Surveyed	Telephone or Computerized Registration	Online academic advising	Online financial aid advising	Toll-free phone/e-mail Access to instructor	Toll free Phone/e-mail access to Tech staff	Online access to wide area network	Instructor visits to remote sites of video courses	TA/tutor/ Facilitator at remote sites of video courses
Community Colleges								
Allegany College	√	No	√	√	◆	√	◆	◆
Anne Arundel Comm. Coll.	√	No	No	◆	◆	◆	◆	◆
Baltimore City Comm. Coll.	No	No	No	√	No	◆	◆	No
Carroll Community College	◆	No	◆	√	◆	No	No	◆
Cecil Community College	No	◆	No	√	No	No	No	No
Chesapeake College		No			◆	No	◆	◆
Comm. Coll. of Baltimore Co.	No	No	No	√	◆	√	◆	◆
College of Southern Md.	√	√	No	√	◆	◆	◆	◆
Frederick Comm. College	No	√	No	√	No	√	No	No
Garrett Community College	No	No	No	◆	No	√	◆	No
Hagerstown Comm. College	No	No	No	√	◆	No	◆	◆
Harford Community College	No	√	√	√	No	√	No	No
Howard Community College	√	No		√	No	√	No	No
Montgomery College	No	No	No	◆	No	No	◆	No
Prince Georges Comm. Coll.	√	No	No	√	◆	No	√	◆
Wor-Wic Community Coll.	No	No	No	◆	◆	√	◆	◆
Totals: Available for all √	5	3	2	11		7	1	
Available for some ◆	1	1	1	4	9	3	10	9
Not available No	9	12	11		7	6	5	7

Table 47: Support Services Available for Distance Learning Students

Independent Institutions

√ = Available for all courses | No = Not available | ◆ = Available in some courses

Institutions Surveyed	Telephone or Computerized Registration	Online academic advising	Online financial aid advising	Toll-free phone/e-mail Access to instructor	Toll free Phone/e-mail access to Tech staff	Online access to wide area network	Instructor visits to remote sites of video courses	TA/tutor/ Facilitator at remote sites of video courses
Independents								
Baltimore Hebrew University	√	√	*No*	√	√	*No*		√
Baltimore International College				No Response				
Binah Inst. Of Adv.Judai Studies				No Response				
Capitol College	No	No	No	√	√	No	◆	No
Columbia Union (No Response)	No	No	No	√	No	√	No	No
Goucher College	√	No	No	√	√	√	◆	No
Hagerstown Business College	No	No	No	√	√	√	No	√
Hood College				No Response				
Johns Hopkins University	No	No	◆	√	√	√	◆	◆
Loyola College				No Response				
Maryland College of Art & Design				No Response				
Maryland Institute, College of Art	No	No	No	√	◆	√	No	No
Mount St.Mary's College				No Response				
National Labor College				No Response				
Ner Israel Rabbinical College				No Response				
College of Notre Dame of MD				No Response				
Seafarers School of Seamanship				No Response				
St.John's College				No Response				
St.Mary's Seminary & University				No Response				
Sojourner Douglass				No Response				
Traditional Acupuncture Institute				No Response				
Villa Julie College				No Response				
Washington Bible College				No Response				
Washington College				No Response				
Western Maryland College	No	No	No	√	No	√	No	No
Yeshiva College				No Response				
Total Available for all √	2	1		8	5	6		2
Avaliable for some ◆			1		1		3	1
Not available *No*	6	7	7		2	2	4	5

Table 48: Support Services Available for Distance Learning Students

*Summary Table**

√ = Available for all courses No = Not available ◆ = Available in some courses

	Telephone or Computerized Registration			Online academic advising			Online financial aid advising			Toll-free phone/e-mail Access to instructor			Toll free Phone/e-mail access to tech staff			Online access to wide area network			Instructor visists to remote sites of video courses			TA/tutor/ Facilitator At remote sites of video courses		
	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No
4 Year Public Institutions (13)	6	2	5	2	2	9	5	1	7	8	1	4	7	1	5	4	3	6	1	8	4	0	7	6
Community Colleges (16)	5	1	10	3	1	12	2	1	13	11	4	1	0	9	7	7	3	6	1	10	5	0	9	7
Totals for public institutions (29)	**11**	**3**	**15**	**5**	**3**	**21**	**7**	**2**	**20**	**19**	**5**	**5**	**7**	**10**	**12**	**11**	**6**	**12**	**2**	**18**	**9**	**0**	**16**	**13**
Independent Institutions (27)	2	0	25	1	0		0	1	26	8	0	19	5	1	21	6	0	21	0	3	24	2	1	24
Totals (56 institutions)	**13**	**3**	**40**	**6**	**3**	**47**	**7**	**3**	**46**	**27**	**5**	**24**	**12**	**11**	**33**	**17**	**6**	**33**	**2**	**19**	**35**	**2**	**17**	**37**

Table 49: Library Services Available for Distance Learning Students

Four-Year Public Institutions

√ = Available for all courses No = Not available ◆ = Available in some courses

Institutions Surveyed	Online library catalog	Online library orders	Online library reserves	Ability to download full-text items from institutional library	Cooperative agreements with other libraries for access
FOUR-YEAR PUBLICS					
Bowie State University	√	√	√	√	√
Coppin State College	◆	◆	◆	No	◆
Frostburg State Univ	√	◆	◆	√	√
Salisbury University			No Response		
Towson University	√	√	√	No	√
Univ. of Baltimore (UB)	√	√	√	√	√
UMBC (Baltimore County)	√	√	√	√	√
UMB (Baltimore)	◆	◆	◆	◆	◆
UMCP (College Park)	◆	◆	◆	◆	No
UMES (Eastern Shore)			No Response		
UMUC (Univ. College)	√	√	√	√	√
Morgan State University	√	◆	◆	√	√
St Mary's College			No Response		
Totals: Available for all √	7	5	5	6	7
Available for some◆	3	5	5	2	2
Not available No	0	0	0	2	1

Table 50: Library Services Available for Distance Learning Students

Community Colleges

√ = Available for all courses No = Not available ◆ = Available in some courses

Institution Surveyed	Online library catalog	Online library orders	Online library reserves	Ability to download full-text items from institutional library	Cooperative agreements with other libraries for access
Community Colleges					
Allegany College	No	No	No	No	√
Anne Arundel Comm. Coll.	√	No	√	√	√
Baltimore City Comm. Coll.	√	√	√	No	√
Carroll Community College	√	√	√	◆	√
Cecil Community College	No	No	No	No	No
Chesapeake College	√	√	√	√	√
Comm. Coll. of Baltimore Co.	√	√	√	√	√
College of Southern Md.	√	No	No	No	√
Frederick Comm. College	√	√	√	√	√
Garrett Community College	√	√	√	√	√
Hagerstown Comm. College	√	√	√	√	No
Harford Community College	√	√	√	√	√
Howard Community College	√	No	No	No	√
Montgomery College	No	No	No	No	√
Prince Georges Comm. Coll.	No	No	No	No	√
Wor-Wic Community Coll.	√	No	No	√	√
Totals: Available for all √	12	8	9	8	14
Available forsome◆	0	0	0	1	0
Not available No	4	8	7	7	2

Table 51: Library Services Available for Distance Learning Students

Independent Institutions

√ = Available for all courses No = Not available ◆ = Available in some courses

Institutions Surveyed	Online library catalog	Online library orders	Online library reserves	Ability to download full-text items from institutional library	Cooperative agreements with other libraries for access
Independents					
Baltimore Hebrew University	No	No	No	No	√
Baltimore International College					
Binah Inst Of Adv Judaic Studies					
Capitol College	√	No	No	No	√
Columbia Union (No Response)	√	√	√	No	√
Goucher College	√	√	√	√	√
Hagerstown Business College	No	No	No	No	√
Hood College					
Johns Hopkins University	√	√	√	√	√
Loyola College					
Maryland College of Art & Design					
Maryland Institute, College of Art	√	No	No	No	√
Mount St.Mary's College					
National Labor College					
Ner Israel Rabbinical College					
College of Notre Dame of MD					
Seafarers School of Seamanship					
St.John's College					
St.Mary's Seminary & University					
Sojourner Douglass					
Traditional Acupuncture Institute					
Villa Julie College					
Washington Bible College					
Washington College					
Western Maryland College	√	√	√	√	√
Yeshiva College					
Totals: Available for all √	6	4	4	3	8
Available for some ◆	0	0	0	0	0
Not available *No*	2	4	4	5	0

Table 52: Library Services Available for Distance Learning Students

Independent Institutions

√ = Available for all courses No = Not available ◆ = Available in some courses

Institutions Surveyed	Online library catalog			Online library orders			Online library reserves			Ability to download full-text items from institutional library			Cooperative agreements with other libraries for access		
	√	◆	No	√	◆	No	√	◆	No	√	◆	No	√	◆	No
4 Year Public Institutions (13)	7	3	3	5	5	3	5	5	3	6	2	5	7	2	4
Community Colleges (16)	12	0	4	8	0	8	9	0	7	8	1	7	14	0	2
Totals for public Institutions (29)	**19**	**3**	**17**	**13**	**5**	**11**	**14**	**5**	**10**	**14**	**3**	**12**	**21**	**2**	**6**
Independent Institutions (27)	6	0	21	4	0	23	4	0	23	3	0	24	8	0	19
Totals (56 institutions)	**25**	**3**	**38**	**17**	**5**	**34**	**18**	**5**	**33**	**17**	**3**	**36**	**29**	**2**	**25**

Table 53: Institutions Making Training/Technical Assistance Available to Faculty 1997 and 1999-2000

Four-Year Public Institutions

Institution Surveyed	Type of Training/Assistance					
	Use & Application of Distance Education Technologies		Development of Curricula for Distance Education Courses		Teaching Methods for Distance Learning Courses	
FOUR-YEAR PUBLICS	**1997**	**1999-2000**	**1997**	**1999-2000**	**1997**	**1999-2000**
Bowie State University	X	X	X	X	X	X
Coppin State College		X		X		X
Frostburg State University	X	X	X	X	X	X
Salisbury University	X	X		X		X
Towson University		X		X		X
Univ. of Baltimore (UB)	X	X	X	X	X	X
UMBC (Baltimore County)		X		X		X
UMB (Baltimore)	X	X		X		X
UMCP (College Park)	X	X	X	X	X	X
UMES (Eastern Shore)	X	X		X	X	X
UMUC (University College)	X	X	X	X	X	X
Morgan State University	X	X		X		X
St Mary's College						
Totals	8	12	5	12	6	12

Table 54: Institutions Making Training/Technical Assistance Available to Faculty

Community Colleges

Institutions Surveyed	Type of Training/Assistance					
	Use & Application of Distance Education Technologies		Development of Curricula for Distance Education Courses		Teaching Methods for Distance Learning Courses	
Community Colleges	**1997**	**1999-2000**	**1997**	**1999-2000**	**1997**	**1999-2000**
Allegany College	X	X			X	X
Anne Arundel Comm. Coll.	X	X	X	X	X	X
Baltimore City Comm. Coll.	X	X	X	X	X	X
Carroll Community College	X	X	X	X	X	X
Cecil Community College		X		X		X
Chesapeake College	X	X	X	X	X	X
Comm. Coll. of Baltimore Co	X	X	X	X	X	X
College of Southern Md.	X	X	X	X	X	X
Frederick Comm. College		X				
Garrett Community College		X		X		X
Hagerstown Comm. College	X	X				X
Harford Community College	X	X	X	X	X	X
Howard Community College	X	X	X	X	X	X
Montgomery College	X	X	X	X		X
Prince Georges Comm. Coll.	X	X	X	X	X	X
Wor-Wic Community Coll.						
Totals	**12**	**15**	**10**	**12**	**10**	**14**

Table 55: Institutions Making Training/Technical Assistance Available to Faculty

Independent Institutions

Institutions Surveyed	Type of Training/Assistance					
	Use & Application of Distance Education Technologies		Development of Curricula for Distance Education Courses		Teaching Methods for Distance Learning Courses	
Independents	1997	1999-2000	1997	1999-2000	1997	1999-2000
Baltimore Hebrew University		X		X		X
Baltimore International College						
Binah Inst. Of Adv. Judaic Studies						
Capitol College	X	X	X	X	X	X
Columbia Union (No Response)						
Goucher College	X	X	X	X	X	X
Hagerstown Business College		X		X		X
Hood College						
Johns Hopkins University		X		X		X
Loyola College	X				X	
Maryland College of Art & Design						
Maryland Institute, College of Art	X	X	X			
Mount St.Mary's College						
National Labor College						
Ner Israel Rabbinical College						
College of Notre Dame of MD						
Seafarers School of Seamanship						
St John's College						
St Mary's Seminary & University						
Sojourner Douglass						
Traditional Acupuncture Institute						
Villa Julie College						
Washington Bible College						
Washington College						
Western Maryland College						
Yeshiva College						
Totals: √	4	6	3	5	3	5

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Table 56: Training/Technical Assistance Available to Faculty
Summary Table

	Type of Training/Assistance					
	Use & Application of Distance Education Technologies		Development of Curricula for Distance Education Courses		Teaching Methods for Distance Learning Courses	
	1997	1999-2000	1997	1999-2000	1997	1999-2000
4 Year Public Institutions	8	12	5	12	6	12
Community Colleges	12	15	10	12	10	14
Independent Institutions	4	6	3	5	3	5
Total	24	33	18	29	19	31

Table 57: Multi-media & Computer-Aided Instruction Equipment and Services

Four-Year Public Institutions

Institution Surveyed	Internet Node Site	Electronic Classroom	E-mail	WWW	Institutional Website	Web Page capability for students	Bulletin board or computer conferencing system	Class listserv capability	Voice Mail
FOUR-YEAR PUBLICS									
Bowie State University	X		X	X	X		X	X	X
Coppin State College		X	X	X	X	X	X	X	X
Frostburg State University	X		X	X	X	X	X		X
Salisbury University	X	X	X	X	X	X	X	X	X
Towson University	X	X	X	X	X	X	X	X	X
Univ. of Baltimore (UB)	X	X	X	X	X	X	X	X	X
UMBC (Baltimore County)	X	X	X	X	X	X	X	X	X
UMB (Baltimore)	X	X	X	X	X	X	X	X	X
UMCP (College Park)		X	X	X	X		X		X
UMES (Eastern Shore)	X	X	X	X	X	X	X	X	X
UMUC (University Colege)	X	X	X	X	X	X	X	X	X
Morgan State University	X	X	X	X	X	X	X	X	X
St Mary's College									
Total	10	10	12	12	12	10	12	10	12

Table 58: Multi-media & Computer-Aided Instruction Equipment and Services

Community Colleges

Institutions Surveyed	Internet Node Site	Electronic Classroom	E-mail	WWW	Institutional Website	Web Page capability for students	Bulletin board or computer conferencing system	Class listserv capability	Voice Mail
Community Colleges									
Allegany College	X	X	X	X	X	X			X
Anne Arundel Comm. Coll.	X	X	X	X	X	X	X		X
Baltimore City Comm. Coll.	X	X	X	X	X				
Carroll Community College	X	X	X	X	X	X	X	X	X
Cecil Community College	X	X	X					X	X
Chesapeake College					X		X		X
Comm. Coll. of Balt. Co.			X		X	X		X	X
College of Southern Md.	X	X	X	X	X	X	X	X	X
Frederick Comm. College		X	X	X	X		X	X	X
Garrett Community College	X	X	X	X	X	X	X		X
Hagerstown Comm. Coll.	X	X	X	X	X				X
Harford Community Coll.		X	X	X	X			X	X
Howard Community Coll.	X	X	X	X	X		X	X	X
Montgomery College	X	X	X	X	X	X	X		X
Prince Geo. Comm. Coll.	X	X	X	X	X		X		X
Wor-Wic Community Coll.	X	X	X	X	X	X	X		X
Total	12	14	15	13	15	8	10	7	15

Table 59: Multi-media & Computer-Aided Instruction Equipment and Services

Independent Institutions

Institutions Surveyed	Internet Node Site	Electronic Classroom	E-mail	WWW	Institutional Web Page	Web Page capability for students	Bulletin board or computer conferencing system	Class listserv capability	Voice Mail
Independents									
Baltimore Hebrew Univ.			X	X	X	X	X	X	
Baltimore Internat									
Binah Inst. of Adv. Jud. St									
Capitol College	X	X	X	X	X	X	X		X
Columbia Union			X	X	X	X	X		X
Goucher College									
Hag. Business College	X	X	X	X	X	X	X		
Hood College									
Johns Hopkins University	X	X	X	X	X	X	X	X	X
Loyola College									
Md College of Art & Design									
Maryland Inst. Coll. of Art	X	X	X	X	X	X	X	X	X
Mount St Mary's College									
National Labor College									
Ner Israel Rabbinical Coll									
Coll. of Notre Dame of MD									
Seafrrs Schl of Seamnshp									
St John's College									
St Mary's Sem & University									
Sojourner Douglass Coll									
Traditional Acupte									
Villa Julie College									
Washington Bible College									
Washington College									
Western Maryland College									
Yeshiva College									
Baltimore Hebrew Univ									
Totals	**4**	**4**	**6**	**6**	**6**	**6**	**6**	**3**	**4**

Table 60: Multi-media & Computer-Aided Instruction Equipment and Services

Summary Table

Institution Surveyed	Internet Node Site	Electronic Classroom	E-mail	WWW	Institutional Web Page	Web Page capability for students	Bulletin board or computer conferencing system	Class listserv capability	Voice Mail
Four Year Public Institutions	10	10	12	12	12	10	12	10	12
Community Colleges	12	14	15	13	15	8	10	7	15
Independent Institutions	4	4	6	6	6	6	6	3	4
Total	26	28	33	31	33	24	28	20	31

Table 61: Video Production & Analog Video Links

Four-Year Public Institutions

Institution Surveyed	Full Production Studio	TV Field Production Units	ITFS Channel	ITFS Receive Site	Microwave Dist. Links	Ku Band Satellite Uplink	C Band Satellite Uplink	Ku Band Satellite Downlink	C Band Satellite Downlink	CATV Channels	Broadcast TV Stations
FOUR-YEAR PUBLICS											
Bowie State University	X	X						X	X	X	
Coppin State College	X							X	X	X	
Frostburg State University								X	X	X	X
Salisbury University	X	X	X		X			X	X	X	X
Towson University		X						X	X	X	X
Univ. of Baltimore (UB)											
UMBC (Baltimore County)	X	X	X	X	X				X	X	
UMB (Baltimore)	X	X						X	X	X	
UMCP (College Park)	X		X	X	X	X	X	X	X		
UMES (Eastern Shore)	X	X	X		X			X	X		
UMUC (University College)	X				X						
Morgan State University	X	X						X	X	X	
St Mary's College											
Total	9	7	4	2	5	1	1	9	10	8	3

Table 62: Video Production & Analog Video Links

Community Colleges

Institution Surveyed	Full Production Studio	TV Field Production Units	ITFS Channel	ITFS Receive Site	Microwave Dist. Links	Ku Band Satellite Uplink	C Band Satellite Uplink	Ku Band Satellite Downlink	C Band Satellite Downlink	CATV Channels	Broadcast TV Stations
Community Colleges											
Allegany College	X							X	X		
Anne Arundel Comm. Coll.		X						X	X	X	X
Baltimore City Comm. Coll.								X	X		
Carroll Community College	X	X						X	X	X	
Cecil Community College											
Chesapeake College								X	X	X	
Comm. Coll. of Balt. Co.	X	X						X	X	X	X
College of Southern Md.								X	X		X
Frederick Comm. College	X	X						X	X	X	
Garrett Community College								X	X	X	
Hagerstown Comm. Coll.	X				X			X	X	X	
Harford Community Coll.	X							X	X	X	
Howard Community Coll.	X	X						X	X	X	
Montgomery College	X	X						X	X	X	
Prince Geo. Comm. Coll.	X	X						X	X	X	
Wor-Wic Community Coll.			X	X	X					X	X
Total	9	7	1	1	2			14	14	12	4

Table 63: Video Production & Analog Video Links

Independents

Institution Surveyed	Full Production Studio	TV Field Production Units	ITFS Channel	ITFS Receive Site	Microwave Dist. Links	Ku Band Satellite Uplink	C Band Satellite Uplink	Ku Band Satellite Downlink	C Band Satellite Downlink	CATV Channels	Broadcast TV Stations
Baltimore Hebrew Univ											
Baltimore Internat											
Binah Inst. of Adv. Jud. St											
Capitol College		X									
Columbia Union											
Goucher College											
Hag. Business College											
Hood College											
Johns Hopkins University		X			X			X	X		
Loyola College											
Md College of Art & Design											
Maryland Inst. Coll. of Art	X										
Mount St Mary's College											
National Labor College											
Ner Israel Rabbinical Coll											
Coll. of Notre Dame of MD											
Seafrrs Schl of Seamnshp											
St John's College											
St Mary's Sem & University											
Sojourner Douglass Coll											
Traditional Acupte											
Villa Julie College											
Washington Bible College											
Washington College											
Western Maryland College											
Yeshiva College											
Total	1	2			1			1	1		

Table 64: Video Production & Analog Video Links

Summary Table

Institution Surveyed	Full Production Studio	TV Field Production Units	ITFS Channel	ITFS Receive Site	Microwave Dist. Links	Ku Band Satellite Uplink	C Band Satellite Uplink	Ku Band Satellite Downlink	C Band Satellite Downlink	CATV Channels	Broadcast TV Stations
Four Year Public Institutions	9	7	4	2	5	1	1	9	10	8	3
Community Colleges	9	7	1	1	2			14	14	12	4
Independent Institutions	1	2			1			1	1		
Total	19	16	5	3	8	1	1	24	25	20	7

Table 65: **Compressed Video, Radio Stations**
Four-Year Public Institutions

Institution Surveyed	Interactive Digital Compressed Video Codecs	Broadcast Radio Stations
FOUR-YEAR PUBLICS		
Bowie State University	X	
Coppin State College	X	
Frostburg State University	X	
Salisbury University	X	
Towson University	X	X
Univ. of Baltimore (UB)	X	
UMBC (Baltimore County)	X	
UMB (Baltimore)	X	
UMCP (College Park)	X	
UMES (Eastern Shore)	X	X
UMUC (University College)	X	
Morgan State University	X	X
St.Mary's College		
Total	12	3

Table 66: Compressed Video, Radio Stations

Community Colleges

Institution Surveyed	Interactive Digital Compressed Video Codecs	Broadcast Radio Stations
COMMUNITY COLLEGES		
Allegany College	X	
Anne Arundel Comm. Coll.	X	
Baltimore City Comm. Coll.	X	X
Carroll Community College	X	
Cecil Community College		
Chesapeake College	X	
Comm. Coll. of Balt. Co.	X	
College of Southern Md.	X	
Frederick Comm. College	X	
Garrett Community College	X	
Hagerstown Comm. Coll.	X	
Harford Community Coll.	X	
Howard Community Coll.	X	
Montgomery College	X	X
Prince Geo. Comm. Coll.	X	
Wor-Wic Community Coll.	X	
Total	15	2

Table 67: Compressed Video, Radio Stations

Independent Institutions

InstitutionS Surveyed	Interactive Digital Compressed Video Codecs	Broadcast Radio Stations
INDEPENDENTS		
Baltimore Hebrew Univ		
Baltimore Internat		
Binah Inst. of Adv. Jud. St		
Capitol College		
Columbia Union		
Goucher College		
Hag. Business College		
Hood College		
Johns Hopkins University	X	X
Loyola College	X	
Md College of Art & Design		
Maryland Inst. Coll. of Art		
Mount St Mary's College		
National Labor College		
Ner Israel Rabbinical Coll		
Coll. of Notre Dame of MD		
Seafrrs Schl of Seamnshp		
St John's College		
St Mary's Sem & University		
Sojourner Douglass Coll		
Traditional Acupte		
Villa Julie College		
Washington Bible College		
Washington College		
Western Maryland College		
Yeshiva College		
Total	**2**	**1**

Table 68: Compressed Video, Radio Stations

Summary Table

	Institutions Having Interactive Digital Compressed Video Codecs	Broadcast Radio Stations
Four Year Public Institutions	12	3
Community Colleges	15	2
Independent Institutions	2	1
Total	**28**	**6**

MARYLAND HIGHER EDUCATION COMMISSION

FORM DE: DISTANCE EDUCATION SURVEY

Institution _____

Name of person completing this form _____

Title/Position _____ Phone # _____

Address: _____

Definition of "Off-Campus Distance Learning Instruction:" For the purpose of this survey, the term "distance education" refers to education or training delivered off-campus via audio, video and/or computer technologies, but **does not** include courses conducted exclusively via traditional print-based correspondence or courses in which the instructor travels to the remote site to deliver instruction in person for all or most class meetings. For purposes of this form, "off-campus" means *a location other than the principal location of the sponsoring institution. "Off-campus site" may include a branch campus, a student's home, a workplace, or any other site where instruction is delivered electronically.*

Reporting period: The reporting period is Fall semester 1999 and Spring semester 2000.

1. How many individual courses (course titles, not sections of courses) did your institution offer to off-campus students by some form of off-campus distance education instruction during the reporting period? For example, English 101 is one course regardless of the number of sections offered. Count a course twice if it was offered in both the Fall and Spring semesters.

_____ Total # of courses _____ Total # of Credit Courses _____ Total # of Non-credit Courses

2. How many students (duplicated headcount) were registered in distance education courses during the reporting period? The number given should reflect total course registrations.

	Credit Enrollments	**Non-Credit Enrollments**	**Total Enrollments**
Maryland residents	_____	_____	_____
Out-of-state students	_____	_____	_____
Total enrollments	_____	_____	_____

3. Does your institution have a separate office dedicated primarily to distance education?

_____ Yes _____ No

4. Of the total number of distance education courses your institution offered and completed, how many used the following technologies as the **primary** mode of delivery (If a course used multiple technologies, count it under each technology used only if you cannot determine the primary technology) and how many course registrations were attributable to each form of delivery:

(A)_____ # Two-way interactive video and audio

(B)_____ # One-way live video, one-way audio (no live interaction during instruction)

(C)_____# One-way prerecorded video

(D) _____# Asynchronous online (e.g., Internet or bulletin board systems)

(E) _____# Two-way online (computer-based) interaction during an instructional period

(F) _____# Other (Please specify technology_____

_____

5. Of the total number of live and interactive video courses your institution offered, how many were offered at the following types of sites? (If a course was offered at multiple sites, count it under each type of site):

(A) _____ # at a branch campus, center or other off-campus instructional site of **your** institution (includes courses originating at a branch campus or other off-campus site and delivered to students on your main campus)

(B) _____ # at a public 4-year college or university in Maryland

(C) _____ # at a community college in Maryland

(D) _____ # at an independent college/university in Maryland

(E) _____ # at a public secondary school in Maryland

(F) _____ # at a public elementary or middle school in Maryland

(G) _____ # at the student's home

(H) _____ # at a private sector workplace

(I) _____ # at a state agency site

(J) _____ # at a military base

(K) _____ # at other sites in Maryland (Please describe)_____

(L) _____ # at sites outside of Maryland (Please describe)_____

6. Of the total number of distance education courses your institution offered, for how many was the course content developed by each of the following means? (Select only one method for each course):

   (A) _____ # developed by faculty or a department at your institution

   (B) _____ # developed by another institution of higher education

   (C) _____ # developed in collaboration with another institution of higher education

   (D) _____ # developed by a commercial vendor

   (E) _____ # other developer (Please specify)_____

   _____

7. Of the total number of distance education courses offered by your institution, how many were offered exclusively as distance education courses (i.e., there was no equivalent course taught during the same semester on campus)? _____ #

8. How many customized training activities did you offer for clients? _____#

9. During the reporting period, could students at your institution complete an *entire* degree program (120+ credit hours for a Bachelor's degree; 60+ for an Associate degree) by taking distance education courses exclusively? _____ Yes _____No

10. During the reporting period, did your institution offer any academic degree programs *primarily* by telecommunications? For these purposes, a "program offered primarily by telecommunications" means that more than 75% of the courses for a degree program are available by telecommunications.
    _____Yes _____No

11. If you answered "Yes" to questions 9 or 10, indicate the "program(s) offered by telecommunications" by name and degree level in the table on the following page. If you need more space, please make additional copies of the table.

Programs Offered by Telecommunications

Program Name	Entirely by DE	Primarily by DE	Degree Level		
			Assoc.	Bach.	Master's

12. Is your institution a member of MarylandOnline? _____Yes _____No

13. Is your institution a member of the Maryland Digital Library? _____Yes _____No

14. How many of your distance education courses were designed **primarily** for each of the following? (Do not double count courses.)

(A) _____ Undergraduate students

(B) _____ Graduate students

(C) _____ Professional continuing ed. students (e.g.,medical personnel, teachers)

(D) _____ Other continuing ed. students

(E) _____ High school students

(F) _____ Elementary/middle school s students

(G) _____ Adult basic education students (e.g., GED, ESL)

(H) _____ Other (please specify)_____

_____

15. (A) For the reporting period, indicate, by circling the appropriate number, which of the following resources were available to students enrolled by your institution in distance education courses:

	Not available	Available for some courses	Available for all courses
A. Automated telephone or online application	1	2	3
B. Telephone/computerized registration	1	2	3
C. Online academic advising/counseling	1	2	3
D. Online financial aid application	1	2	3
E. Instructor visits remote site(s)	1	2	3
F. Toll-free telephone, E-mail or online access to instructor	1	2	3
G. Teaching assistant, tutor, facilitator regularly available at remote sites	1	2	3
H. Toll-free telephone, E-mail or other online access to technical support staff (help desk)	1	2	3

	Not available	Available for some courses	Available for all courses
I. Ability to electronically			
a) access your institution's library catalog	1	2	3
b) order a library item	1	2	3
c) reserve a library item	1	2	3
d) download a copy of the item desired	1	2	3
J. Cooperative agreements for students to use other libraries	1	2	3
K. Online access to wide area networks	1	2	3
L. Other (Specify)			
_____	1	2	3
_____	1	2	3

16. For the reporting period, please indicate if training/technical assistance, including peer training, was available to your faculty in the following areas by circling the appropriate column:

	Available	Not Available
(A) Use and application of distance education technologies	Yes	No
(B) Development of curricula for distance education courses	Yes	No
(C) Teaching methods for distance learning courses	Yes	No
(D) Other (Please specify)	Yes	No

_____

_____

17. During the reporting period, please indicate with a ✓ which of the following types of services and equipment your institution made available to faculty and/or students to support the production and/or distribution of distance education courses:

Type of Facility/Equipment	Available service/equip.	Number (if applicable)
A. Computer-and Internet-based:		
(1) Electronic Classroom(s) (networked computer classroom)	____	____
(2) Internet Node Site(s) (indicate bandwidth of connection: ____)	____	[redacted]
(3) Internet Electronic Mail	____	
(4) World Wide Web server(s)	____	[redacted]
(5) Institutional Website	____	
(6) Webpage capability for students	____	
(7) Bulletin board or computer conferencing system	____	
(8) Class listserv capabilities	____	
(9) Voice mail	____	
(10) Other technologies (Please specify):		
B. Video and audio		
(1) Full Production TV Studio(s)	____	____
(2) TV Field Production Unit(s)	____	____
(3) ITFS Channel(s)	____	____
(4) ITFS Receive Site(s)	____	____
(5) Microwave Distribution Link(s)	____	____
(6) Ku Band Satellite Uplink(s)	____	____
(7) C Band Satellite Uplink(s)	____	____
(8) Ku Band Satellite Downlink(s)	____	____

Type of Facility/Equipment	Available service/equip.	Number (if applicable)
(9) C Band Satellite Downlink(s)	____	____
(10) CATV Channel(s)	____	____
(11) Broadcast TV Station(s)	____	____
(12) Broadcast Radio Station(s)	____	____
(13) FM Subchannel(s)	____	____
(14) Interactive Digital Compressed Video Codecs	____	____
(15) Digital Compressed Video Transmission Links (indicate bandwidth used: ____)	____	____
(16) Audioconference Bridge(s)	____	____

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